

**Proceedings of the American Academy of Arts and Sciences.**

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RECORDS OF MEETINGS, 1930-1931.

OFFICERS AND COMMITTEES FOR 1931-1932.

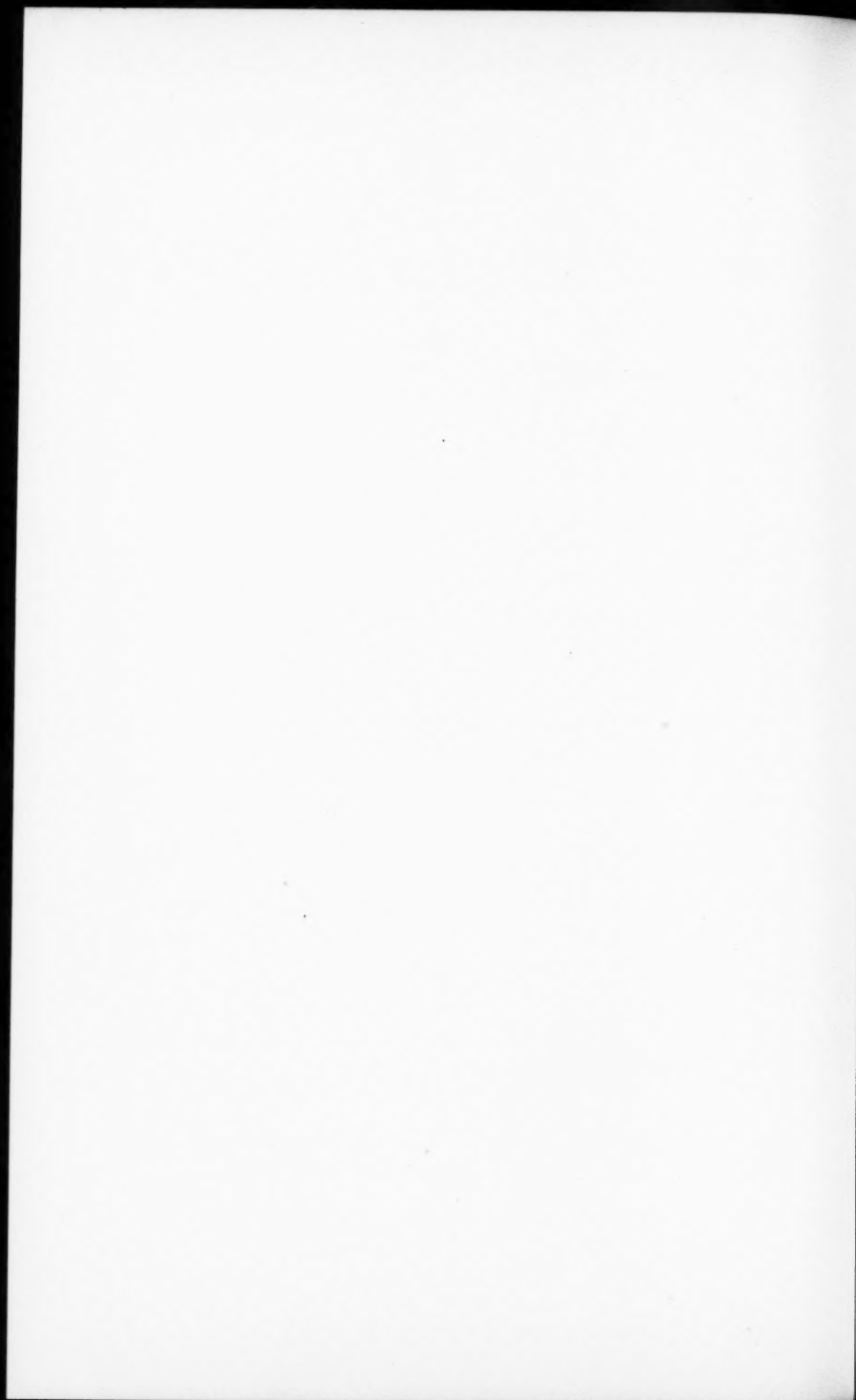
LIST OF THE FELLOWS, ASSOCIATES, AND FOREIGN  
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## RECORDS OF MEETINGS.

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One thousand one hundred and eighty-third meeting.

OCTOBER 8, 1930.—STATED MEETING.

The Academy met at its House at 8.33 P. M.

The PRESIDENT in the Chair.

There were present forty-six Fellows and Associates and eight guests.

The records of the annual meeting of May 14 were read and approved.

The Corresponding Secretary reported the receipt of letters accepting Fellowship from LeRoy Abrams, David Cheever, John Erskine, Henry C. Fall, Philip Franklin, Thomas H. Gage, James Geddes, Jr., William H. P. Hatch, Frank B. Jewett, Lafayette B. Mendel, Lyman C. Newell, Greenleaf W. Pickard, Harry H. Plaskett, George E. Russell, James H. Ryan, George A. Sanderson, Karl Sax, Torald H. Sollmann, Dirk J. Struik, Fritz B. Talbot, Ernest H. Wilkins; and of letters accepting Foreign Honorary Membership from Alfredo Casella, Louis E. Lapicque, Archibald B. Macallum, and Sir Aurel Stein.

He also announced on behalf of the Council that the following grants had been made from the Permanent Science Fund:

\$250 to Charles B. Lipman toward the support of studies on the biology of unusually heat-resisting organisms;

\$300 to Ralph H. Cheney for apparatus and animals necessary for the completion of researches on the relation of caffeine to striated muscle and motor fatigue;

\$500 to Columbus Iselin to be applied toward the cost of publication of a paper entitled "A Report on the Coastal Waters of Labrador, based on the Explorations of the 'Chance' during the Summer of 1926";

\$50 to George H. Shull to be used in the collection of materials for the study of the genetics and cytology of *Oenothera Lamarckiana* hybrids;

\$1000 to G. W. Kenrick for construction of apparatus for the study of radio transmission in the high frequency or short wave length region.

It was announced that the President had appointed the following delegates: Arthur E. Kennelly, to represent the Academy at the inauguration of Karl T. Compton as president of the Massachusetts Institute of Technology on June 6, 1930; Merritt L. Fernald, at the International Botanical Congress at Cambridge, England, August 16-23, 1930; Arthur A. Noyes (with William B. Munro as alternate) at the inauguration of Robert G. Sproul as president of the University of California.

The President announced the death of seven Fellows:—Florian Cajori (Class I, Section 1), Jesse Walter Fewkes (Class III, Section 2), Kuno Francke (Class III, Section 4), William Suddards Franklin (Class I, Section 2), Ira Nelson Hollis (Class I, Section 4), William Caleb Loring (Class III, Section 1), Horatio C. Wood (Class II, Section 4); and of one Foreign Honorary Member:—Adolf von Harnack (Class III, Section 3).

The Academy passed a vote of thanks to Ambassador W. Cameron Forbes for his gift of a Philippine narra wood table and three chairs.

The Fellows elected in May were then presented to the Academy.

The following communication was presented:

Mr. C. Iselin: "Physical Oceanography," with lantern slide illustrations.

Seven papers were read by title:

"An Equation of State for Gas Mixtures. II. A Study of the Methods of Combination of the Constants of the Beattie-Bridgeman Equation of State," by James A. Beattie and Shikao Ikehara;

"A Study of the Absolute Temperature Scale. I. The Construction of Several Types of Platinum Resistance Thermometers," by James A. Beattie, David D. Jacobus, and John M. Gaines;

"Equations for Vapor Pressures and Latent Heats, including Approximate Equations for Solid Compounds containing a Gaseous Component," by Louis J. Gillespie;

"A Report on the Coastal Waters of Labrador, Based on Explorations of the 'Chance' during the Summer of 1926," by C. Iselin, presented by Thomas Barbour;

"The Green's Matrix and Expansion Problem for Systems of Integro-Differential Equations," by F. C. Jonah, presented by Jacob Tamarkin;

"The Joule-Thomson Effect in Air. Second Paper," by J. R. Roebuck, presented by P. W. Bridgman;

"The Volume of Eighteen Liquids as a Function of Pressure and Temperature," by P. W. Bridgman.

The meeting was dissolved at 9.58 P. M.

**One thousand one hundred and eighty-fourth meeting.**

NOVEMBER 12, 1930.—STATED MEETING.

The Academy met at its House at 8.35 P. M.

The PRESIDENT in the Chair.

There were present forty-two Fellows and Associates and ten guests.

The records of the meeting of October 8 were read and approved.

The President announced the death of two Fellows:—Frederick Perry Fish (Class III, Section 1) and Ernest Henry Wilson (Class II, Section 2); of one Associate:—Henry Winchester Cunningham; and of one Foreign Honorary Member:—Adolf Engler (Class II, Section 2).

The following communication was presented:

Mr. James F. Norris: "Interatomic Forces in Molecules containing Carbon."

One paper was presented by title: "Contribution towards a Monograph of the Laboulbeniaceæ. Part V," by Roland Thaxter.

The meeting was dissolved at 9.43 P. M.

**One thousand one hundred and eighty-fifth meeting.**

DECEMBER 10, 1930.—STATED MEETING.

The Academy met at its House at 8.30 P. M.

The PRESIDENT in the Chair.

There were present twenty-seven Fellows and five guests.

The records of the meeting of November 12 were read and approved.

The following communication was presented:

Mr. Truman L. Kelley: "Some Problems in the Analysis of Mental Life."

Two papers were presented by title: "Necessary Conditions in the Problem of Lagrange and Mayer under General End Conditions," by Marston Morse and Sumner Myers.

"Compressibility and Pressure Coefficient of Resistance, including Single Crystal Magnesium," by P. W. Bridgman.

The meeting was dissolved at 9.35 P. M.

**One thousand one hundred and eighty-sixth meeting.**

JANUARY 14, 1931.—STATED MEETING.

The Academy met at its House at 8.25 P. M.

The PRESIDENT in the Chair.

There were present thirty-five Fellows and Associates and one guest.

The records of the meeting of December 10 were read and approved.

The Corresponding Secretary reported the receipt of a letter from Dr. Kenneth D. Blackfan, resigning Fellowship.

He announced that the Council had appointed Mr. Alfred L. Ripley a member of the Committee of Finance to fill the unexpired term of Mr. Frederick P. Fish, deceased.

He also announced that Messrs. C. H. Grandgent, of Cambridge, Henry Guy, of Grenoble, and Paul Hazard, of Paris, had been appointed delegates to represent the Academy at the 400th Anniversary of the Collège de France, June 18-20, 1931.

The President announced the death of two Fellows:—Edward Channing (Class III, Section 3), Morris Gray (Class III, Section 4); and of two Foreign Honorary Members:—Joseph Jacques Césaire Joffre (Class I, Section 4), Sir George Otto Trevelyan (Class III, Section 3).

The following communication was presented:

Dr. Francis G. Benedict: "New Studies in Human and Reptile Metabolism," with lantern slide illustrations.

One paper was presented by title: "Researches on the Rotation of Permalloy and Soft Iron by Magnetization and the Nature of the Elementary Magnet," by S. J. Barnett.

The meeting was dissolved at 9.43 P. M.

**One thousand one hundred and eighty-seventh meeting.****FEBRUARY 11, 1931.—STATED MEETING.**

The Academy met at its House at 8.35 P. M.

The PRESIDENT in the Chair.

There were present twenty-nine Fellows and Associates and four guests.

The records of the meeting of January 14 were read and approved.

The Corresponding Secretary presented the summary of a report to the Council by a special committee appointed by that body to consider the matter of increasing the membership of the Academy. On motion of Vice-President Ford, it was

*Voted*, To refer the matter to a committee which should make a report to be considered at the next meeting.

The President then reappointed the same committee: A. E. Kennelly, Chairman, W. B. Cannon, and J. H. Beale.

The Corresponding Secretary announced that the Council had made the following grants from the Permanent Science Fund:

To Prof. Walter C. Schumb, Massachusetts Institute of Technology, \$500. for the purpose of procuring apparatus to be used in the study of the effect of the electrodeless discharge upon chemical reactions occurring in the gaseous state;

To the American Association of Variable Star Observers (Dr. Alice H. Farnsworth, President, Mount Holyoke College), \$200. for replenishing the stock of variable star charts for distribution to its members;

To Dr. Zenon M. Bacq, Faculty of Medicine, University of Brussels, \$300. for apparatus and monkeys necessary for researches in the physiology of the sympathico-adrenal system.

The President announced the death of two Foreign Honorary Members:—Alfred Percival Maudslay (Class III, Section 2) and Ignatz Urban (Class II, Section 2); and of one Associate:—Charles Ernest Fay.

The following communication was presented:

Mr. William J. Crozier: "The Quantitative Treatment of Animal Behavior," with lantern slide illustrations.

The meeting was dissolved at ten o'clock.

## One thousand one hundred and eighty-eighth meeting.

MARCH 11, 1931.—STATED MEETING.

The Academy met at its House at 8.30 P. M.

The PRESIDENT in the chair.

There were present thirty-five Fellows and Associates.

The records of the meeting of February 11 were read and approved.

The President announced the death of Fred Dayton Lambert, Fellow in Class II, Section 2.

The President appointed the Nominating Committee as follows:

Albert Sauveur, of Class I

William H. Weston, Jr., of Class II

Chandler R. Post, of Class III

On recommendation of the Council the following appropriations were made for the ensuing year:

From the income of the General Fund, \$8,050, to be used as follows:

for General and Meeting expenses . . . . .	\$ 900
for Library expenses . . . . .	2,000
for Books, Periodicals, and Binding . . . . .	1,400
for House expenses . . . . .	2,800
for Treasurer's expenses . . . . .	950
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	\$8,050

From the income of the Publication Fund, \$3,936.80, to be used for publication.

From the income of the Rumford Fund, \$3,822.42, to be used as follows:

for Research . . . . .	\$2,250.00
for Books, Periodicals, and Binding . . . . .	350.00
for Publication . . . . .	600.00
for use at the discretion of the Committee . . . . .	622.42
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	\$3,822.42

From the income of the C. M. Warren Fund, \$1,192.25, to be used at the discretion of the Committee.

The report of the special committee appointed to consider the matter of increasing the membership of the Academy was presented in printed form by the Chairman, Mr. A. E. Kennelly, as follows:

#### REPORT OF SPECIAL COMMITTEE ON MEMBERSHIP.

Gentlemen:

Your Special Committee on Membership of the Academy, appointed 11th February, 1931, desires to report as follows:

The Committee considers that although the title of our Academy implies equal recognition of the "Arts and Sciences," yet the emphasis at the present time, in regard to membership, papers, communications, discussions and library representation, is principally on the "Sciences." The Committee believe that this inequality in representation has not come about through design, but probably quite fortuitously.

We think that it would be desirable to alter this policy, without delay, for the purpose of building up an Academy in which both the "Arts" and the "Sciences" should be equally represented. At the present time, there are two Classes (I and II) representing the mathematical, physical, natural and physiological sciences, comprising in all 411 Fellows; while there is only one Class (III) for all the arts and humanities, comprising 179 Fellows. Judging from our conversations with individual Fellows in Class III, it would seem that if the Academy should openly decide upon a policy of balancing its activities between the "Arts" and "Sciences," there would be no difficulty in nominating new Fellows of suitably high grade to the "Arts" group, so as to terminate the existing disparity.

To bring about approximate numerical balance between the Fellows representing "Arts" and "Sciences," using these terms in a purely classification sense, it would be necessary to have two Classes in "Arts" (III and IV) to correspond to the existing two Classes (I and II) in "Sciences." It is the opinion of the Committee that the new Class IV should be created forthwith by action of the Academy, in amending its statutes, under the rights therein contained. The existing Class III would have to be rearranged and split into two Classes (III and IV) each with Vice Presidential and Councillor representation, and each with four sections. After consulting with the officers of Class

III, the plan of Section reorganization hereinafter set forth is suggested.

We therefore recommend the passage of the following votes:

- (1) That existing Class III be divided into two Classes, III and IV.
- (2) That the sections of the new Classes III and IV be designated as follows:

### CLASS III. THE SOCIAL ARTS.

Section I. Jurisprudence.

II. Government, International Law, and Diplomacy.

III. Economics and Sociology.

IV. Administration and Affairs.

### CLASS IV. THE LITERARY AND THE FINE ARTS.

Section I. History and Literary Criticism.

II. Philosophy, Psychology, and Homiletics.

III. Philology and Archæology.

IV. Creative Arts.

For the purpose of carrying out the above votes, the following changes in the Statutes are recommended:

(a) Chapter II, Art. 1, Line 3, substitute "four" for "three"; also for "Class III, The Moral and Political Sciences" in the same article, substitute Classes III and IV as presented above in recommended Vote 2.

(b) Chapter II, Art. 2, Line 1, substitute "Eight hundred" for "Six hundred," and in line 2, substitute "Six hundred" for "Four hundred."

(c) Chapter II, Art. 3, Line 2, substitute "One hundred and thirty" for "One hundred."

(d) Chapter IV, Art. 1, Line 2, substitute "Four" for "Three." Second Paragraph, Line 1, substitute "sixteen" for "twelve"; Line 2, substitute "four" for "three."

(e) Chapter IV, Art. 3, Line 2, substitute "Four" for "Three."

(f) Chapter X, Art. 2, Line 1, substitute "Nine" for "Seven."

(g) Chapter XI, Art. 2, (I) Line 1, substitute "four" for "three."

Chapter XI, Art. 2, (IV) Line 2, substitute "four" for "three."



Chapter XI, Art. 2, (IV) Line 14, substitute "four" for "three."

Chapter XI, Art. 2, (V) Line 2, substitute "four" for "three."

Chapter XI, Art. 2, (VI) Line 1, substitute "four" for "three."

Chapter XI, Art. 2, (VII) Line 2, substitute "four" for "three."

(h) Chapter XII, Art. 2, Line 1, substitute "Twenty-five" for "Twenty."

Chapter XII, Art. 2, Line 3, substitute "Eighteen" for "Fifteen."

(i) Chapter XII, Art. 7, Line 4, substitute "twenty-five" for "twenty."

We suggest that any action taken in regard to the Class of Associates shall be postponed at least until after the foregoing recommendations shall have been disposed of.

The recommended changes in the Statutes will require an amendment by the General Court of the Act of Incorporation, Chapter forty-six of the Acts of the year seventeen hundred and seventy-nine. We therefore recommend further that the Academy at once petition the General Court of Massachusetts for the passage of the following Act, which we believe may be obtained before the April Meeting of the Academy:—

An Act relative to the American Academy of Arts and Sciences.

*Be it enacted, etc., as follows:*

Section 1. Section four of Chapter forty-six of the acts of the year seventeen hundred and seventy-nine, as amended by Section 1 of Chapter forty-seven of the acts of the year nineteen hundred and eleven, is hereby further amended by striking out the word "four" in the last line, and inserting in place thereof the word "six," so as to read as follows:—

Section 4. That the fellows of the said academy may from time to time elect such persons to be fellows thereof as they shall judge proper; and that they shall have full power and authority from time to time to suspend, expel or disfranchise any fellow of the said academy who shall by his conduct render himself unworthy of a place in that body, in the judgment of the academy; and also to settle and establish the rules, forms and conditions of election, suspension, expulsion and disfranchisement; *provided*, that the number of the

said academy, who are inhabitants of this state, shall not at any one time be more than six hundred nor less than forty.

Section 2. This act shall take effect upon its passage.

Respectfully submitted,

<i>Special Committee on Membership</i>	{	A. E. KENNELLY, Class I, Chairman,
		W. B. CANNON, Class II,
		J. H. BEALE, Class III.

The report was discussed by Vice-President Ford, and Messrs. Joshua Whatmough, W. H. P. Hatch, J. H. Beale, W. B. Cannon, and B. L. Robinson.

On the motion of Vice-President Ford, it was

*Voted*, That the Academy approves the general principle of increasing its membership as outlined in the report of the Special Committee on Membership.

On the motion of Mr. J. H. Beale, it was

*Voted*, To petition the General Court of Massachusetts to amend Section four of Chapter forty-six of the acts of the year seventeen hundred and seventy-nine, as amended by Section 1 of Chapter forty-seven of the acts of the year nineteen hundred and eleven by striking out the word "four" in the last line, and inserting in place thereof the word "six."

The following communication was presented:

Mr. George LaPiana: "The Romance of Early Christianity in Byzantine Miniatures and the Sources of the Christian Religious Theater," with lantern slide illustrations.

The meeting was dissolved at 10.23 P. M.

**One thousand one hundred and eighty-ninth meeting.**

APRIL 8, 1931.—STATED MEETING.

The Academy met at its House at 8.25 P. M.

The PRESIDENT in the Chair.

There were present thirty-eight Fellows and Associates and one guest.

In the absence of the Recording Secretary, Vice-President Ford was asked to assume his duties.

The records of the meeting of March 11 were read and approved.

In the absence of the Corresponding Secretary, the President made several announcements on behalf of the Council:

A grant of \$500. from the Permanent Science Fund has been made to Professor Tenney L. Davis, of the Massachusetts Institute of Technology, for the employment of two Chinese students for the purpose of continuing translations of Chinese alchemy;

Mr. Arthur E. Kennelly has been reappointed for a new term of three years as the Academy's representative on the Division of Foreign Relations of the National Research Council, dating from June 30, 1931;

Mr. Tenney L. Davis has been appointed the delegate to represent the Academy at the Faraday Centennial in London, September 21, 1931.

The President announced the death of William Coolidge Lane, Fellow in Class III, Section 4, and of Carl Hansen Ostenfeld, Foreign Honorary Member in Class II, Section 2.

A second report of the Special Committee on Membership was presented by the Chairman, Mr. A. E. Kennelly, as follows:

The Committee held a meeting on March 17th, at which Vice-President Ford of Class III, Recording Secretary Clark, Treasurer Bowditch, and Councillor Knudson of Class III were present.

After considerable discussion, the following resectionalisations of Classes III and IV were adopted for recommendation to the Academy:

### CLASS III. THE SOCIAL ARTS.

- Section 1. Jurisprudence.  
2. Government, International Law, and Diplomacy.  
3. Economics and Sociology.  
4. Administration and Affairs.

### CLASS IV. THE FINE ARTS.

- Section 1. Theology, Philosophy, and Psychology.  
2. History and Archaeology.  
3. Philology.  
4. Creative Arts and Criticism.

On motion of Mr. Kennelly, it was

*Voted*, That the old Class III be divided into two classes, III and IV, with eight sections as indicated in his reports.

On motion of Mr. Beale, it was

*Voted*, That the changes in the Statutes indicated in the report be adopted.

On motion of Mr. E. W. Forbes, it was

*Voted*, That in Class IV, the general designation, The Humanities, be substituted for The Fine Arts.

On motion of Mr. Hopkinson, it was

*Voted*, That Section 4 of Class IV be termed The Fine Arts and Belles Lettres instead of The Creative Arts and Criticism, as proposed in the report.

The following communication was presented:

Mr. Charles Hopkinson: "Portrait Painting from the Painter's Point of View."

One paper was presented by title: "Radioactive Disintegration Applied to the Measurement of Geologic Time Illustrated by Application to the Wilberforce Uraninite," by Gerhard Kirsch and Alfred C. Lane.

The meeting was dissolved at 9.58 P. M.

**One thousand one hundred and ninetieth meeting.**

MAY 13, 1931.—ANNUAL MEETING.

The Academy met at its House at 8.23 P. M.

The PRESIDENT in the Chair.

There were present forty-four Fellows and Associates and three guests.

The records of the meeting of April 8 were read and approved.

The Corresponding Secretary reported that several letters and manuscripts of Joseph Hale Abbot, a former Fellow of the Academy, had been received as a gift from his granddaughter, Miss Miriam Abbot.

He announced that the Council had made the following grants from the Permanent Science Fund:

1. To Professor Earnest A. Hooton, of Harvard University, one

thousand dollars toward a budget of twelve thousand dollars required to complete studies of data already collected in an investigation of "The Physical Characteristics of the Criminals in the United States in their Relation to Offense, Nativity, Nationality, Race, and to Certain Conditions, Sociological, Psychological, and Pathological," the grant however, contingent upon the collection by Professor Hooton of the remainder of the required budget of twelve thousand dollars, and the grant to be available only until May first, 1932;

2. To Professor J. LeRoy Conel, of Boston University, two hundred and fifty dollars toward expenses in the collecting of embryos of the Atlantic eel, *Myxine glutinosa*, to be used in the study of the development of its brain;

3. To Professor James H. Woods, of Harvard University, one thousand dollars, toward the expense of publishing, in six volumes, the works of the late Professor Charles S. Peirce;

4. To Professor H. S. Jennings, Director of the Zoological Laboratory of Johns Hopkins University, five hundred dollars, to be used in aiding Dr. Alexander Weinstein in carrying out an investigation of the effects of radiation in producing mutations and on the nature and genetic behavior of the mutations so produced.

The President announced the death of two Fellows:—Albert Abraham Michelson (Class I, Section 2) and Edward Robinson (Class III, Section 2).

The following report of the Council was presented:

#### REPORT OF THE COUNCIL.

Since the last report of the Council there have been reported the deaths of fifteen Fellows: Florian Cajori, Edward Channing, Jesse Walter Fewkes, Frederick Perry Fish, Kuno Francke, William Sudards Franklin, Morris Gray, Ira Nelson Hollis, Fred Dayton Lambert, William Coolidge Lane, William Caleb Loring, Albert Abraham Michelson, Edward Robinson, Ernest Henry Wilson, Horatio C. Wood; seven Foreign Honorary Members: Adolf Engler, Adolf von Harnack, Joseph Jacques Césaire Joffre, Alfred Percival Maudslay, Carl Hansen Ostenfeld, Sir George Otto Trevelyan, Ignatz Urban; and two Associates: Henry Winchester Cunningham, Charles Ernest Fay.

Twenty-one Fellows and four Foreign Honorary Members were elected by the Council and announced to the Academy in May 1930.

The roll now includes 586 Fellows, 93 Foreign Honorary Members, and 30 Associates (not including those elected in May 1931).

The annual report of the Treasurer, Ingersoll Bowditch, was read, of which the following is an abstract:

#### GENERAL FUND.

##### *Receipts.*

Income on hand April 1, 1930 . . . . .	\$1,534.85	
From Investments . . . . .	2,852.48	
From Assessments . . . . .	5,385.00	
From Admissions . . . . .	140.00	
From Interest on Deposits . . . . .	404.90	
From Rumford Fund Income . . . . .	200.00	\$10,517.23

##### *Expenditures.*

Expenses of Library . . . . .	\$2,078.00	
Treasurer's Expenses . . . . .	970.19	
Books and Binding . . . . .	1,697.84	
General Expenses . . . . .	1,309.96	
House Expenses . . . . .	2,673.44	
President's Expenses . . . . .	1.75	
Printing Biographical Notices . . . . .	32.75	\$8,763.93
Income transferred to Principal . . . . .	366.50	\$ 9,130.43

#### RUMFORD FUND.

##### *Receipts.*

Income on hand April 1, 1930 . . . . .	\$7,037.40	
From Investments . . . . .	4,120.10	\$11,157.50

##### *Expenditures.*

Publications . . . . .	\$1,422.16
Purchase and Binding of Books . . . . .	342.44
Research . . . . .	3,036.00

Engraving Medals . . . . .	15.00		
Printing . . . . .	7.70		
Transferred to General Fund In-			
come for care of books . . . .	200.00		
Books and Periodicals—bal. 1929			
transferred to Capital. . . . .	21.69		
Discretion of Committee—bal.			
1929 transferred to Capital . . .	1,105.26	\$6,150.25	
Interest on bonds bought . . . .	17.50		
Income transferred to Principal .	211.10	228.60	\$6,378.85

## C. M. WARREN FUND.

*Receipts.*

Income on hand April 1, 1930 . . . . .	\$ 76.06		
From Investments . . . . .	1,255.00	\$1,331.06	

*Expenditures.*

Research . . . . .	\$908.70		
Vault Rent, part. . . . .	3.00	\$ 911.70	
Interest on bonds bought . . . . .	12.13		
Income transferred to Principal. .	62.75	74.88	\$ 986.58

## PUBLICATION ACCOUNT.

*Receipts.*

Income on hand April 1, 1930 . . . . .	\$9,625.48		
From Income Appleton Fund . . .	\$1,709.02		
From Income Centennial Fund. . .	2,632.50		
From Authors' Reprints . . . . .	181.32		
From Sale of Publications . . . .	620.04		
From Amer. Council of Learned			
Societies . . . . .	1,500.00		
From Income Permanent Science			
Fund . . . . .	500.00	\$7,142.88	\$16,768.36

*Expenditures.*

Publications . . . . .	\$3,703.45		
Vault Rent, part . . . . .	10.00	\$3,713.45	
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Interest on Bonds bought . . . . .	24.95		
Income transferred to Principal . . . . .	222.93	247.88	\$ 3,961.33
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## PERMANENT SCIENCE FUND.

*Receipts.*

Income on hand April 1, 1930 . . . . .	\$ 639.42		
Received for above fund. . . . .	4,310.58	\$ 4,950.00	
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*Expenditures.*

Grants from above fund . . . . .	\$4,450.00		
Transferred to Publication Account . . . . .	500.00	\$ 4,950.00	
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## FRANCIS AMORY FUND.

*Receipts.*

From Investments . . . . .	\$ 2,275.50		
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*Expenditures.*

Publishing Statement . . . . .	\$ 46.75		
Income transferred to Principal . . . . .	2,162.37		
Interest on bonds bought . . . . .	30.00		
Interest on bonds bought . . . . .	36.38	\$ 2,275.50	
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The following reports were also presented:

## REPORT OF THE LIBRARY COMMITTEE.

During the year 161 volumes and 30 unbound numbers of periodicals have been borrowed by 20 different Fellows and 15 different libraries, and many more have been consulted at the Academy. All books taken out have been returned or satisfactorily accounted for.

The number of bound volumes on the shelves at the time of the last report was 42,026. During the year 552 volumes were added, making



the number now 42,578. This includes 44 purchased from the General Fund, 28 from the Rumford Fund, and 480 received by gift or exchange. The number of pamphlets received was 305.

One addition has been made to the periodical subscription list, the new Quarterly Journal of Mathematics (Oxford Series).

The following appropriations were placed at the disposal of the Committee during the past year:

Balance from General Fund . . . . .	\$ 621.99
Appropriation from General Fund. . . . .	3,400.00
Balance from Rumford Fund . . . . .	65.05
Appropriation from Rumford Fund . . . . .	300.00

Total . . . . .	<u>\$4,387.04</u>
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The expenses charged to the Library during the financial year ending April 1, 1931, were:

Salaries . . . . .	\$2,000.00
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Binding:

General Fund . . . . .	\$ 722.25
Rumford Fund . . . . .	75.25

	<u>\$ 797.50</u>
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Purchase of Books and Periodicals:

General Fund . . . . .	\$975.59
Rumford Fund . . . . .	267.19

	<u>\$1,242.78</u>
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Miscellaneous . . . . .	\$ 78.00
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Total . . . . .	<u>\$4,118.28</u>
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There remained on April 1, 1931, an unexpended balance of \$268.76, as follows:

General Fund . . . . .	\$246.15
Rumford Fund . . . . .	22.61

Total . . . . .	<u>\$268.76</u>
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There have been applications to permit photostats to be made from our old and rare volumes. Unless the Academy otherwise directs, it will be the policy to be very liberal in such permissions, but unless there is especially good reason and adequate insurance of volumes unreplaceable or not easily replaceable, this should not involve shipping the volumes away.

Respectfully submitted,

ALFRED C. LANE, *Librarian*.

May 13, 1931.

#### REPORT OF THE RUMFORD COMMITTEE.

The Rumford Committee held five meetings during the academic year 1930-31 (May 14th, Nov. 12th, Dec. 10th, Jan. 14th, and March 11th).

The Committee made the following grants from the Rumford Fund, during the year, in aid of researches on heat and light:

##### 1930

- |          |  |        |
|----------|--|--------|
| No. 284. | April 9th—Prof. T. C. Poulter, Iowa Wesleyan College, Mt. Pleasant, Iowa, for purchase of equipment in researches on effects of pressure on the behaviour of light . . . . . | \$ 300 |
| No. 285. | April 9th—Messrs. E. C. Kemble and F. H. Crawford, Harvard University, for purchase of equipment in spectrophotographic researches. . . . .                                  | 375    |

##### 1931

- |          |   |     |
|----------|---|-----|
| No. 286. | Jan. 14th—Prof. H. Shapley and W. J. Fisher for equipment on meteor research . . . . .  | 450 |
| No. 287. | Jan. 14th—Prof. J. W. McBain, Stanford University, for equipment of research on light-scattering power of sols, gels, and liquid crystals . . . . . | 475 |
| No. 288. | Jan. 14th—Dr. J. C. Stearns, University of Denver, for equipment in research on cosmic rays . . . . .   | 300 |
| No. 289. | Jan. 14th—Prof. A. T. Evans, Miami University, Oxford, Ohio, for equipment in research on influence upon certain lower plants . . . . .             | 200 |

No. 290.	Mar. 11th—Prof. Geo. R. Harrison, Mass. Inst. Technology for equipment in research on intensities of spectral lines from multiply-ionised atoms . . . . .	500
No. 291.	Mar. 11th—Prof. C. E. Mendenhall, University of Wisconsin, for equipment in research on the photo-electric properties of metals . . . . .	500
No. 292.	Mar. 11th—Prof. W. R. Frederickson, Syracuse University, for equipment in studying the Faraday effect spectra in diatomic molecules . . . . .	300
Total . . . . .		\$3,400

The committee voted unanimously, first on January 14th and again on March 11th, to recommend the award of the Rumford Medals to Dr. Karl Taylor Compton "for researches in Thermionics and Spectroscopy."

Reports of progress in researches aided by grants from the Rumford Fund have been received from Messrs. P. W. Bridgman, Annie J. Cannon, F. H. Crawford, G. H. Dieke, N. Feather, Geo. R. Harrison, Norton A. Kent, G. W. Pierce, H. H. Plaskett, T. C. Poulter, J. R. Roebuck, Harlow Shapley, and Harlan T. Stetson.

The following recent publications concern researches that have been aided by grants from the Rumford Fund:

(1). By Prof. P. W. Bridgman, Harvard University, "The Volume of Eighteen Liquids as a Function of Pressure and Temperature," *Proc. Am. Academy of Arts and Sciences*, Vol. 66, No. 5, February 1931, pp. 185-233.

(2). By Prof. P. W. Bridgman, Harvard University, "Compressibility and Pressure Coefficient of Resistance, including Single Crystal Magnesium," *Proc. Am. Academy of Arts and Sciences*, Vol. 66, No. 7, March 1931, pp. 255-270.

(3). By Prof. Harlan T. Stetson, Director Perkins Observatory, Ohio Wesleyan University, "The Influence of Sun Spots on Radio Reception," *Miscellaneous Scientific Papers, Franklin Institute Reprint No. 3, Journal Fr. Inst.* Vol. 210, No. 4, Oct. 1930, pp. 403-419.

(4). By Prof. Harlan T. Stetson, Director Perkins Observatory, Ohio Wesleyan University, "On the Correlation of Radio Reception

with the Moon's Position in the Observer's Sky," *Terrestrial Magnetism and Atmospheric Electricity*, Vol. 36, No. 1, March 1931, pp. 1-5.

(5). By Dr. N. Feather, "Concerning the Absorption Method of Investigating  $\beta$ -Particles of High Energy. The Maximum Energy of the Primary  $\beta$ -Particles of Mesothorium 2," *Physical Review*, Vol. 35, No. 12, June 15, 1930, pp. 1559-1567.

(6). By Dr. N. Feather, "An unsuccessful attempt to influence the Normal Decay of a weak Source of Polonium," *Proc. Cambridge Philosophical Society*, Vol. 26, Part 4, Oct. 1930, pp. 538-541.

Respectfully submitted,

A. E. KENNELLY, *Chairman*.

#### REPORT OF THE C. M. WARREN COMMITTEE.

The Committee had at its disposal at the beginning of the fiscal year 1930-1931, \$1,242.56, of which \$908.70 has been appropriated during the past year.

Since the last annual report grants have been made as follows:

June 5, 1930: to Professors Conant and Kistiakowsky, \$350. for the purchase of a quartz spectrograph to be used in the study of the absorption spectra of organic compounds in solution at liquid air temperatures.

June 5, 1930: to Dr. Nelson K. Richtmyer, Bryn Mawr College, \$260, for the purchase of a micro balance and 30 grams of platinum to be used in the investigation of certain methylated sugars, and the hydrogenation of certain glycosides.

June 5, 1930: to Professor Henry Gilman, Iowa State College, \$200, for the purchase of rare chemicals to be used in the study of chemiluminescence.

June 5, 1930: to Professor H. W. Underwood, Jr., \$100, for the employment of an assistant in connection with the study of the action of anhydrous zinc chloride on ethers.

Four applications for grants amounting to \$1,450 are now before the Committee for action.

Reports of progress have been received from Dr. Charles F. H. Allen, Professor Ralph H. Bullard, Professor Henry Gilman, Professor Carl L. A. Schmidt, Dr. Nelson K. Richtmyer, Professor H. W. Underwood, Jr.

The papers listed below, which have been published since the last report of the Committee, describe the results of investigations aided by the Warren Fund. In each case there is an acknowledgment by the author of the assistance received:

H. Gilman, R. E. Fothergill and J. McGlumphy, "On the sensitivity of the luminescence of some arylmagnesium halides," *Rec. Trav. Chim.* T. 49, No. 6 (June 1930).

L. M. Chapman Rawlius and Carl L. A. Schmidt, "The Mode of Combination Between Certain Dyes and Gelatin Granules," *The Journal of Biological Chemistry*, Vol. LXXXVIII, No. 1, August 1930.

W. M. Hoskins, Merle Randall, and Carl L. A. Schmidt, "The Conductance and Activity Coefficients of Glutamic and Aspartic Acids and Their Monosodium Salts," *The Journal of Biological Chemistry*, Vol. LXXXVIII, No. 1, August 1930.

C. V. Smythe and Carl L. A. Schmidt, "Studies on the Mode of Combination of Iron with Certain Proteins, Amino Acids, and Related Compounds," *The Journal of Biological Chemistry*, Vol. LXXXVIII, No. 1, August 1930.

Carl L. A. Schmidt, Paul L. Kirk, and W. K. Appleman, "The Apparent Dissociation Constants of Arginine and of Lysine and the Apparent Heats of Ionization of Certain Amino Acids," *The Journal of Biological Chemistry*, Vol. LXXXVIII, No. 1, August 1930.

John B. Dalton, Paul L. Kirk, and Carl L. A. Schmidt, "The Apparent Dissociation Constants of Diiodotyrosine, Its Heat of Solution, and Its Apparent Heat of Ionization," *The Journal of Biological Chemistry*, Vol. LXXXVIII, No. 2, September 1930.

J. B. Conant and F. H. Crawford, "The Study of Absorption Spectra of Organic Compounds at Liquid Air Temperatures," *Proc. N. Acad. Sci.*, Vol. 16, No. 8, pp. 552-554, August 1930.

Charles F. H. Allen, "Cyclohexanone-Benzil," *Canadian Journal of Research*, 4: 264-274, 1931.

Respectfully submitted,

JAMES F. NORRIS, *Chairman.*

#### REPORT OF THE COMMITTEE OF PUBLICATION.

1. The Committee of Publication has held but one meeting during the year, the rest of the work of the Committee being carried on by

correspondence. The Chairman of the Committee by invitation attended one meeting of the Rumford Committee. Since the present Committee took charge eleven papers for the Proceedings and one Memoir have been accepted for publication. Owing to limited funds and obligations assumed by the previous Committee, it has been necessary to decline for publication several papers presented by non-members. The papers accepted are as follows:

A. Records number for 1928-29 and 1929-30.

1. Iselin, C.—A Report on the Coastal Waters of Labrador. 37 pages.
2. Creighton, W. S.—The New World Species of the Genus *Salenopsis*. 112 pages.
3. Gillespie, L. J.—Equations for Vapor Pressures and Latent Heats. 12 pages.
4. Beattie, Jacobs and Gaines—An Experimental Study of the Absolute Temp. Scale. 17 pages.
5. Bridgman, P. W.—The Volume of Eighteen Liquids as a Function of Pressure and Temperature. 48 pages.
6. Morse, Marston, and Myers, Byron—The Problems of La Grange and Mayer with Variable End Points. 18 pages.
7. Bridgman, P. W.—Compressibility and Pressure Coefficient of Resistance, including Single Crystal Magnesium. 16 pages.
8. Barnett, S. J.—Researches on the Rotation of Permalloy and Soft Iron by Magnetization and the Nature of the Elementary Magnet.
9. Keyes, F. G.—Note on the Kelvin Scale Temperature of Freezing Water.
10. Kirsch, G. and Lane, A. C.—Radio-active Disintegration Applied to the Measurement of Geological Time Illustrated by Application to the Wilberforce Uraninite.
11. Thaxter, R.—Contribution to a Monograph on the Laboulbeniaceæ. Part V.

Eight of these have already appeared in print. The remaining four are in the printer's hands.

2. The financial accounts of the Committee may be briefly summarized as follows:

Total Appropriation for the year 1930-31 . . . .	\$13,860.77
Total Expenditures for the year 1930-31 . . . .	3,703.45
	<hr/>
Balance . . . . .	\$10,157.32
Additional Receipts	
From Sales . . . . .	\$ 620.04
From Author's Reprints . . . . .	181.32
From Am. Council Learned Societies . . . . .	1,500.00
From Permanent Science Fund . . . . .	500.00
	<hr/>
Total Amount Available April 1, 1931 . . . .	\$12,958.68

In addition to these funds there have been placed at the disposal of the Committee

Rumford Funds available Apr. 1, 1930 . . . . .	\$3,252.58
Expenditures for Publication . . . . .	1,422.16
	<hr/>
Rumford Funds Balance carried over . . . . .	\$1,830.42
Farlow Herbarium Funds for Thaxter Memoir . . . .	\$3,000.00

3. Some apologies from a committee which has thirteen thousand dollars at its disposal at the end of a fiscal year may seem in order. The explanation for such a large balance is found in the fact that the expensive Sapir volume and the Thaxter Memoir have not yet been paid for. The two together will probably cost not less than eight thousand dollars.

4. The delay in the appearance of the Sapir volume on the Paiute Language has been explained by Professor Sapir as the result of the necessity of ordering a considerable number of matrixes for special characters. The proofreading he says has been slow and difficult because of the technical nature of the material. Parts one and two are already in print and part three—the last—is now in galley proof. Quoting from his last letter, "the volume should be out before the end of the summer at latest, I should think."

5. The Committee wishes to express its appreciation of the support received from President E. B. Wilson, from the Rumford Committee, and from the Committee on the Permanent Science Fund.

Respectfully submitted,

H. V. NEAL, *Chairman.*

## REPORT OF THE HOUSE COMMITTEE.

The House Committee has had funds at its disposal amounting to \$3,597.77, made up as follows:

Balance from previous year . . . . .	\$ 837.77
Appropriation for 1930-31 . . . . .	2,500.00
Received for use of rooms . . . . .	260.00
	<hr/>
	\$3,597.77

Of this amount, the sum of \$2,648.27 has been spent for the routine expenses, janitor, light, power, heat, telephone, etc., and \$630.07 has been spent for upkeep and equipment, making a total of \$3,278.34, and leaving an unexpended balance of \$319.43. The chief items of upkeep this year have been the painting of the lecture hall, the staircase hall, and the kitchen, and rather extensive repairs on the roof.

Meetings have been held as follows:

The Academy . . . . .	8
American Antiquarian Society . . . . .	1
American Chemical Society, Northeastern Section . . . . .	8
Archæological Institute of America . . . . .	2
Copley Society . . . . .	1
Harvard-Technology Chemical Club . . . . .	7
New England Botanical Club . . . . .	9

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The Council Chamber has been used for Academy Council and Committee meetings, and also by the Trustees of the Children's Museum, the New England Farm and Garden Association, the Thursday Evening Club, etc.

A detailed list of expenditures follows:

Janitor . . . . .	\$ 977.00
Electricity { Light . . . . .	203.10
{ Power . . . . .	96.65
Coal . . . . .	988.83
Elevator . . . . .	85.59
Gas . . . . .	72.50



Telephone . . . . .	103.88
Water . . . . .	36.80
Ash tickets. . . . .	40.20
Upkeep . . . . .	580.57
Furnishing and equipment . . . . .	49.50
Janitor's supplies and sundries . . . . .	43.72

Total expenditure . . . . . \$3,278.34

Respectfully submitted,

S. BURT WOLBACH, *Chairman.*

May 13, 1931.

It was *Voted*, To award the Rumford Premium to Dr. Karl Taylor Compton for researches in thermionics and spectroscopy.

On the recommendation of the Treasurer, it was *Voted*, That the annual assessment for 1931-1932 be \$15.

The annual election resulted in the choice of the following officers and committees:

JEREMIAH D. M. FORD, *President*

HARRY M. GOODWIN, *Vice-President for Class I*

WALTER B. CANNON, *Vice-President for Class II*

EDWIN F. GAY, *Vice-President for Class III*

CHARLES B. GULICK, *Vice-President for Class IV*

TENNEY L. DAVIS, *Corresponding Secretary*

WALTER E. CLARK, *Recording Secretary*

INGERSOLL BOWDITCH, *Treasurer*

ALFRED C. LANE, *Librarian*

HERBERT V. NEAL, *Editor*

*Councillors for Four Years.*

HARRY E. CLIFFORD, of Class I

GEORGE G. WILSON, of Class III

OAKES AMES, of Class II

CHARLES HOPKINSON, of Class IV

*Councillor for Three Years.*

ROSCOE POUND, of Class III

*Councillor for Two Years.*

ARTHUR N. HOLCOMBE, of Class III

*Councillor for One Year.*

GEORGE H. CHASE, of Class IV

*Finance Committee.*

THOMAS BARBOUR

PAUL J. SACHS

ALFRED L. RIPLEY

*Rumford Committee.*

ARTHUR E. KENNELLY

ELIHU THOMSON

HARRY M. GOODWIN

HARLOW SHAPLEY

PERCY W. BRIDGMAN

CHARLES L. NORTON

NORTON A. KENT

*C. M. Warren Committee.*

JAMES F. NORRIS

GREGORY P. BAXTER

ARTHUR D. LITTLE

REID HUNT

WALTER L. JENNINGS

FREDERICK G. KEYES

CHARLES A. KRAUS

*Publication Committee.*(Editor) HERBERT V. NEAL, *ex officio* Chairman

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JOSEPH H. BEALE, of Class III

FREDERIC T. LEWIS, of Class II

GEORGE F. MOORE, of Class IV

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(Librarian) ALFRED C. LANE

RAYMOND C. ARCHIBALD, of Class I

ROBERT P. BLAKE, of Class III

THOMAS BARBOUR, of Class II

HENRY B. WASHBURN, of Class IV

*House Committee.*S. BURT WOLBACH, *Chairman*

ROBERT P. BIGELOW

WILLIAM H. LAWRENCE

*Committee on Meetings.*

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THE RECORDING SECRETARY

GEORGE H. PARKER

DANIEL F. COMSTOCK

JOSHUA WHATMOUGH

*Auditing Committee.*

GEORGE R. AGASSIZ

JOHN E. THAYER

The Corresponding Secretary reported that the following gentlemen had been elected members of the Academy by the Council:

## FELLOWS.

## CLASS I.

- Section 1.* George Rutledge, Belmont.  
*Section 2.* Karl Taylor Compton, Cambridge.  
George Russell Harrison, Cambridge.  
Robert Bruce Lindsay, Providence, R. I.  
Otto Oldenberg, Cambridge.  
*Section 3.* William Albert Noyes, Jr., Providence, R. I.  
*Section 4.* Charles Harold Berry, Belmont.  
George Leonard Hosmer, Woburn.

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- Section 1.* George Francis McEwen, La Jolla, Cal.  
*Section 2.* Charles Alfred Weatherby, Cambridge.  
*Section 3.* William King Gregory, New York, N. Y.  
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William Bosworth Castle, Boston.  
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Zechariah Chafee, Jr., Cambridge.  
Calvin Coolidge, Northampton.  
Fred Tarbell Field, Newton.  
James Ford, Cambridge.  
Manley Ottmer Hudson, Cambridge.  
Nathan Isaacs, Cambridge.  
Truman Lee Kelley, Cambridge.  
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Edmund Morris Morgan, Arlington.

- Herbert Parker, South Lancaster.  
Thomas Nelson Perkins, Milton.  
Thomas Reed Powell, Cambridge.  
Henry Knox Sherrill, Boston.  
Jeremiah Smith, Jr., Cambridge.  
George Woodward Wickersham, New York, N. Y.
- Section 2.* Edward Cooke Armstrong, Princeton, N. J.  
Samuel Hazzard Cross, Cambridge.  
Francis Peabody Magoun, Jr., Cambridge.
- Section 3.* John Donald Black, Belmont.  
Melvin Thomas Copeland, Cambridge.  
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Sidney Bradshaw Fay, Cambridge.  
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Pitirim Alexandrovich Sorokin, Cambridge.  
Oliver Mitchell Wentworth Sprague, Cambridge.  
Donald Skeele Tucker, Cambridge.
- Section 4.* Stephen Vincent Benét, New York, N. Y.  
Robert Frost, South Shaftsbury, Vt.  
Raymond Dexter Havens, Baltimore, Md.  
Robert Silliman Hillyer, Cambridge.  
Henry James, New York, N. Y.  
Paul Manship, New York, N. Y.  
Daniel Gregory Mason, New York, N. Y.  
Frank Jewett Mather, Princeton, N. J.  
Paul Elmer More, Princeton, N. J.  
Kenneth Ballard Murdock, Cambridge.  
Robert Kilburn Root, Princeton, N. J.

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## CLASS II.

- Section 2.* Ludwig Diels, Berlin.  
*Section 3.* August Krogh, Copenhagen.

CLASS III.

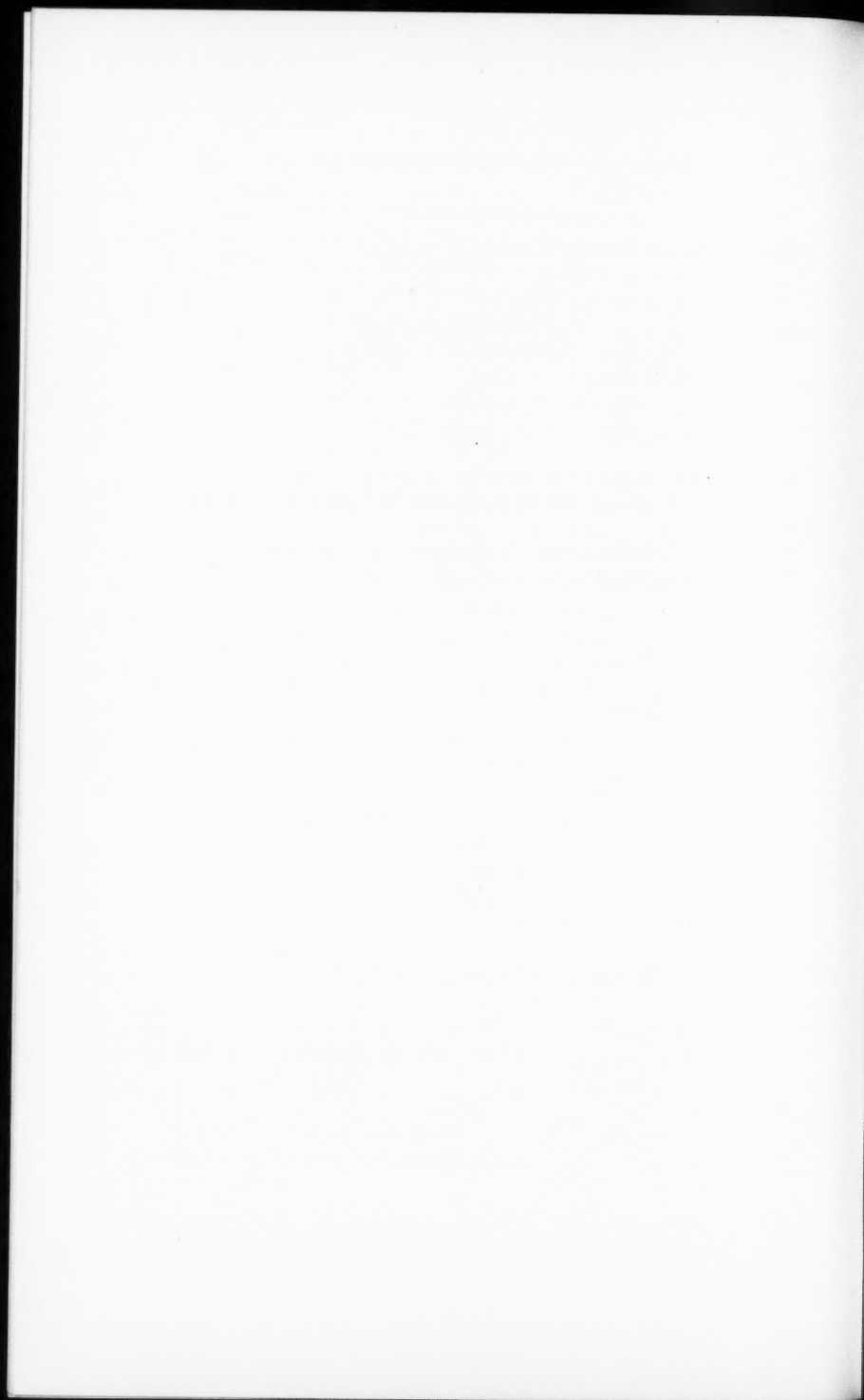
- Section 2.* Robert Seymour Conway, St. Albans.  
Sylvain Lévi, Paris.  
Antoine Meillet, Paris.
- Section 3.* Herbert Albert Laurens Fisher, Oxford.  
George Macaulay Trevelyan, Cambridge.
- Section 4.* John Galsworthy, London.  
Edgar Allison Peers, Liverpool.  
Charles Sanford Terry, Aberdeen.

The following communications were presented:

Dr. John L. Bremer: "Motion Pictures of the Living Heart of the Embryonic Chick."

Mr. Joseph H. Beale: "Promising Lines of Legal Research."

The meeting was dissolved at 10.05 P. M.



# American Academy of Arts and Sciences.

## OFFICERS AND COMMITTEES FOR 1931-1932.

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*Terms expire 1932.*

*Terms expire 1933.*

*Terms expire 1934.*

*Terms expire 1935.*

*Terms expire 1932.*

*Terms expire 1933.*

*Terms expire 1934.*

*Terms expire 1935.*

<sup>1</sup> Died December 5, 1931.

**COMMITTEE OF FINANCE.**

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**HOUSE COMMITTEE.**

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ROBERT P. BIGELOW,

DAVIS R. DEWEY.

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THE RECORDING SECRETARY,

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GEORGE H. PARKER,

CHARLES J. BULLOCK,

JOSHUA WHATMOUGH.



LIST  
OF THE  
FELLOWS, ASSOCIATES, AND FOREIGN HONORARY  
MEMBERS.

(Corrected to December 7, 1931.)

FELLOWS.—628.

(Number limited to eight hundred.)

CLASS I.—*Mathematical and Physical Sciences*.—204.

SECTION I.—*Mathematics and Astronomy*.—51.

Charles Greeley Abbot . . . . .	Washington, D. C.
Walter Sydney Adams . . . . .	Pasadena, Cal.
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Ernest William Brown . . . . .	New Haven, Conn.
William Elwood Byerly . . . . .	Cambridge
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Dunham Jackson . . . . .	Minneapolis, Minn.
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Carl Otto Lampland . . . . .	Flagstaff, Ariz.
Willem Jacob Luyten . . . . .	Minneapolis, Minn.

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Frederick Slocum . . . . .	Middletown, Conn.
Virgil Snyder . . . . .	Ithaca, N. Y.
Joel Stebbins . . . . .	Madison, Wis.
Harlan True Stetson . . . . .	Delaware, Ohio
Dirk Jan Struik . . . . .	Cambridge
Henry Taber . . . . .	Worcester
Jacob David Tamarkin . . . . .	Providence, R. I.
Harry Walter Tyler . . . . .	Washington, D. C.
Oswald Veblen . . . . .	Princeton, N. J.
Joseph Leonard Walsh . . . . .	Cambridge
Alfred North Whitehead . . . . .	Cambridge
Frederick Shenstone Woods . . . . .	Newton

CLASS I., SECTION II.—*Physics*.—59.

Adelbert Ames, Jr. . . . .	Hanover, N. H.
Joseph Sweetman Ames . . . . .	Baltimore, Md.
Samuel Jackson Barnett . . . . .	Los Angeles, Cal.
Carl Barus . . . . .	Providence, R. I.
Louis Agricola Bauer . . . . .	Washington, D. C.
Percy William Bridgman . . . . .	Cambridge

Walter Guyton Cady . . . . .	Middletown, Conn.
George Ashley Campbell . . . . .	New York, N. Y.
Leslie Lyle Campbell . . . . .	Boston
Emory Leon Chaffee . . . . .	Cambridge
Arthur Holly Compton . . . . .	Chicago, Ill.
Karl Taylor Compton . . . . .	Cambridge
Daniel Frost Comstock . . . . .	Boston
William David Coolidge . . . . .	Schenectady, N. Y.
Henry Crew . . . . .	Evanston, Ill.
Harvey Nathaniel Davis . . . . .	Hoboken, N. J.
Clinton Joseph Davisson . . . . .	New York, N. Y.
Arthur Louis Day . . . . .	Washington, D. C.
William Johnson Drisko . . . . .	Winchester
William Duane . . . . .	Boston
Alexander Wilmer Duff . . . . .	Worcester
Arthur Woolsey Ewell . . . . .	Worcester
Harry Manley Goodwin . . . . .	Brookline
George Ellery Hale . . . . .	Pasadena, Cal.
Edwin Herbert Hall . . . . .	Cambridge
Arthur Cobb Hardy . . . . .	Wellesley
George Russell Harrison . . . . .	Cambridge
Hammond Vinton Hayes . . . . .	Boston
John Charles Hubbard . . . . .	Baltimore, Md.
Gordon Ferrie Hull . . . . .	Hanover, N. H.
Charles Clifford Hutchins . . . . .	Brunswick, Me.
Frederick Eugene Ives . . . . .	Philadelphia, Pa.
James Edmund Ives . . . . .	Washington, D. C.
William White Jacques . . . . .	Boston
Edwin Crawford Kemble . . . . .	Cambridge
Norton Adams Kent . . . . .	Newton Center
Frank Arthur Laws . . . . .	Salem
Henry Lefavour . . . . .	Boston
Robert Bruce Lindsay . . . . .	Providence, R. I.
Theodore Lyman . . . . .	Brookline
Ernest George Merritt . . . . .	Ithaca, N. Y.
Dayton Clarence Miller . . . . .	Cleveland, O.
Robert Andrews Millikan . . . . .	Pasadena, Cal.

Harry Wheeler Morse . . . . .	Stanford University, Cal.
Edward Leamington Nichols . . . . .	Ithaca, N. Y.
Charles Ladd Norton . . . . .	Boston
Otto Oldenberg . . . . .	Cambridge
George Washington Pierce . . . . .	Cambridge
Michael Idvorsky Pupin . . . . .	New York, N. Y.
Frederick Albert Saunders . . . . .	Cambridge
John Clarke Slater . . . . .	Cambridge
John Stone Stone . . . . .	San Diego, Cal.
Maurice deKay Thompson . . . . .	Brookline
Elihu Thomson . . . . .	Swampscott
Manuel Sandoval Vallarta . . . . .	Brookline
David Locke Webster . . . . .	Palo Alto, Cal.
Edwin Bidwell Wilson . . . . .	Brookline
Robert Williams Wood . . . . .	Baltimore, Md.
John Zeleny . . . . .	New Haven, Conn.

CLASS I., SECTION III.—*Chemistry*.—50.

Roger Adams . . . . .	Urbana, Ill.
Wilder Dwight Bancroft . . . . .	Ithaca, N. Y.
Gregory Paul Baxter . . . . .	Cambridge
James Alexander Beattie . . . . .	Brookline
Arthur Alphonzo Blanchard . . . . .	Cambridge
Marston Taylor Bogert . . . . .	New York, N. Y.
William Crowell Bray . . . . .	Berkeley, Cal.
Russell Henry Chittenden . . . . .	New Haven, Conn.
Arthur Messinger Comey . . . . .	Cambridge
James Bryant Conant . . . . .	Cambridge
Tenney Lombard Davis . . . . .	Norwell
Henry Fay . . . . .	Boston
George Shannon Forbes . . . . .	Cambridge
Edward Curtis Franklin . . . . .	Palo Alto, Cal.
Louis John Gillespie . . . . .	Cambridge
Lawrence Joseph Henderson . . . . .	Cambridge
Charles Loring Jackson . . . . .	Boston
Walter Louis Jennings . . . . .	Worcester
Grinnell Jones . . . . .	Cambridge

Frederick George Keyes . . . . .	Cambridge
Elmer Peter Kohler . . . . .	Cambridge
Charles August Kraus . . . . .	Providence, R. I.
Arthur Becket Lamb . . . . .	Cambridge
Irving Langmuir . . . . .	Schenectady, N. Y.
Gilbert Newton Lewis . . . . .	Berkeley, Cal.
Warren Kendall Lewis . . . . .	Newton
Arthur Dehon Little . . . . .	Brookline
Duncan Arthur MacInnes . . . . .	New York, N. Y.
Lafayette Benedict Mendel . . . . .	New Haven, Conn.
Edward Mueller . . . . .	Cambridge
Samuel Parsons Mulliken . . . . .	Cambridge
Charles Edward Munroe . . . . .	Forest Glen, Md.
Lyman Churchill Newell . . . . .	Brookline
James Flack Norris . . . . .	Boston
Arthur Amos Noyes . . . . .	Pasadena, Cal.
William Albert Noyes . . . . .	Urbana, Ill.
William Albert Noyes, Jr. . . . .	Providence, R. I.
Samuel Cate Prescott . . . . .	Brookline
Robert Hallowell Richards . . . . .	Jamaica Plain
Martin André Rosanoff . . . . .	Valencia, Pa.
Allan Winter Rowe . . . . .	Boston
George Scatchard . . . . .	Cambridge
Miles Standish Sherrill . . . . .	Winchester
Harry Monmouth Smith . . . . .	Brookline
Julius Oscar Stieglitz . . . . .	Chicago, Ill.
Richard Chace Tolman . . . . .	Pasadena, Cal.
William Hultz Walker . . . . .	Pasadena, Cal.
Willis Rodney Whitney . . . . .	Schenectady, N. Y.
Robert Seaton Williams . . . . .	Cambridge
Alpheus Grant Woodman . . . . .	Watertown

CLASS I., SECTION IV.—*Technology and Engineering*.—44.

Comfort Avery Adams . . . . .	Belmont
Bernard Arthur Behrend . . . . .	Wellesley Hills
Charles Harold Berry . . . . .	Belmont
William Hubert Burr . . . . .	New Canaan, Conn.

Vannevar Bush . . . . .	Belmont
John Joseph Carty . . . . .	Winter Park, Fla.
Harry Ellsworth Clifford . . . . .	Newton
Arthur Powell Davis . . . . .	Oakland, Cal.
Theodore Harwood Dillon . . . . .	Cambridge
Philip Drinker . . . . .	Brookline
Gano Dunn. . . . .	New York, N. Y.
William Frederick Durand . . . . .	Palo Alto, Cal.
Charles Leavitt Edgar . . . . .	Brookline
Gordon Maskew Fair . . . . .	Cambridge
Frederic Harold Fay . . . . .	Boston
John Ripley Freeman . . . . .	Providence, R. I.
John Hays Hammond. . . . .	New York, N. Y.
George Leonard Hosmer . . . . .	Woburn
William Hovgaard . . . . .	Brookline
James Robertson Jack . . . . .	Watertown
Dugald Caleb Jackson . . . . .	Cambridge
Frank Baldwin Jewett . . . . .	New York, N. Y.
Lewis Jerome Johnson . . . . .	Cambridge
Arthur Edwin Kennelly . . . . .	Cambridge
William Henry Lawrence . . . . .	Jamaica Plain
Charles Thomas Main . . . . .	Winchester
Lionel Simeon Marks . . . . .	Cambridge
Edward Furber Miller . . . . .	Newton
Frederick Law Olmsted . . . . .	Brookline
Charles Francis Park . . . . .	Taunton
William Barclay Parsons . . . . .	New York, N. Y.
Langdon Pearse . . . . .	Chicago, Ill.
Harold Pender. . . . .	Philadelphia, Pa.
Greenleaf Whittier Pickard . . . . .	Newton Center
George Edmond Russell . . . . .	Arlington
Albert Sauveur. . . . .	Cambridge
William Sowden Sims . . . . .	Newport, R. I.
Henry Lloyd Smyth . . . . .	Watertown
Charles Milton Spofford . . . . .	Brookline
John F. Stevens . . . . .	Baltimore, Md.
Edward Pearson Warner. . . . .	New York, N. Y.

Arthur Edward Wells . . . . .	New York, N. Y.
Robert Spurr Weston . . . . .	Boston
Joseph Ruggles Worcester . . . . .	Boston

CLASS II.—*Natural and Physiological Sciences.*—209.SECTION I.—*Geology, Mineralogy, and Physics of the Globe.*—50.

Wallace Walter Atwood . . . . .	Worcester
Norman Levi Bowen . . . . .	Washington, D. C.
Isaiah Bowman . . . . .	New York, N. Y.
Kirk Bryan . . . . .	Cambridge
Henry Helm Clayton . . . . .	Canton
Herdman Fitzgerald Cleland . . . . .	Williamstown
Reginald Aldworth Daly . . . . .	Cambridge
Edward Salisbury Dana . . . . .	New Haven, Conn.
William Morris Davis . . . . .	Palo Alto, Cal.
Benjamin Kendall Emerson . . . . .	Amherst
William Ebenezer Ford . . . . .	New Haven, Conn.
James Walter Goldthwait . . . . .	Hanover, N. H.
Louis Caryl Graton . . . . .	Cambridge
Herbert Ernest Gregory . . . . .	Honolulu, T. H.
William Jackson Humphreys . . . . .	Washington, D. C.
Ellsworth Huntington . . . . .	New Haven, Conn.
Robert Tracy Jackson . . . . .	Peterborough, N. H.
Thomas Augustus Jaggar . . . . .	Honolulu, T. H.
Douglas Wilson Johnson . . . . .	New York, N. Y.
Arthur Keith . . . . .	Washington, D. C.
Alfred Church Lane . . . . .	Cambridge
Esper Signius Larsen, Jr. . . . .	Cambridge
Andrew Cowper Lawson . . . . .	Berkeley, Cal.
Charles Kenneth Leith . . . . .	Madison, Wis.
Waldemar Lindgren . . . . .	Brookline
Frederic Brewster Loomis . . . . .	Amherst
Alexander George McAdie . . . . .	Hampton, Va.
George Francis McEwen . . . . .	La Jolla, Cal.
Donald Hamilton McLaughlin . . . . .	Cambridge
Kirtley Fletcher Mather . . . . .	Cambridge
Edward Bennett Mathews . . . . .	Baltimore, Md.

John Campbell Merriam . . . . .	Washington, D. C.
William John Miller . . . . .	Los Angeles, Cal.
Charles Palache . . . . .	Cambridge
Percy Edward Raymond . . . . .	Lexington
Austin Flint Rogers . . . . .	Palo Alto, Cal.
Robert Wilcox Sayles . . . . .	Chestnut Hill
Waldemar Theodore Schaller . . . . .	Washington, D. C.
Charles Schuchert . . . . .	New Haven, Conn.
William Berryman Scott . . . . .	Princeton, N. J.
Hervey Woodburn Shimer . . . . .	Hingham
Frank Bursley Taylor . . . . .	Fort Wayne, Ind.
Thomas Wayland Vaughan . . . . .	La Jolla, Cal.
Charles Hyde Warren . . . . .	New Haven, Conn.
David White . . . . .	Washington, D. C.
Herbert Percy Whitlock . . . . .	New York, N. Y.
Bailey Willis . . . . .	Palo Alto, Cal.
Arthur Winslow . . . . .	Boston
John Eliot Wolff . . . . .	Pasadena, Cal.
Frederick Eugene Wright . . . . .	Washington, D. C.

CLASS II, SECTION II.—*Botany*.—39.

LeRoy Abrams . . . . .	Stanford University, Cal.
Oakes Ames . . . . .	North Easton
Joseph Charles Arthur . . . . .	Lafayette, Ind.
Irving Widmer Bailey . . . . .	Cambridge
Liberty Hyde Bailey . . . . .	Ithaca, N. Y.
Edward Wilber Berry . . . . .	Baltimore, Md.
Nathaniel Lord Britton . . . . .	New York, N. Y.
Douglas Houghton Campbell . . . . .	Palo Alto, Cal.
George Perkins Clinton . . . . .	New Haven, Conn.
Bradley Moore Davis . . . . .	Ann Arbor, Mich.
Edward Murray East . . . . .	Jamaica Plain
Rollins Adams Emerson . . . . .	Ithaca, N. Y.
Alexander William Evans . . . . .	New Haven, Conn.
Joseph Horace Faull . . . . .	Cambridge
Merritt Lyndon Fernald . . . . .	Cambridge
Richard Thornton Fisher . . . . .	Petersham



Harvey Monroe Hall . . . . .	Stanford University, Cal.
Robert Almer Harper . . . . .	New York, N. Y.
Albert Spear Hitchcock . . . . .	Washington, D. C.
John George Jack . . . . .	East Walpole
Edward Charles Jeffrey . . . . .	Cambridge
Willis Linn Jepson . . . . .	Berkeley, Cal.
Ivan Murray Johnston . . . . .	Jamaica Plain
Jacob Goodale Lipman . . . . .	New Brunswick, N. J.
Burton Edward Livingston . . . . .	Baltimore, Md.
Elmer Drew Merrill . . . . .	Berkeley, Cal.
Winthrop John Vanleuven Osterhout . . . . .	New York, N. Y.
George James Peirce . . . . .	Palo Alto, Cal.
Alfred Rehder . . . . .	Jamaica Plain
Benjamin Lincoln Robinson . . . . .	Cambridge
Karl Sax . . . . .	Jamaica Plain
William Albert Setchell . . . . .	Berkeley, Cal.
Arthur Bliss Seymour . . . . .	Cambridge
Elvin Charles Stakman . . . . .	St. Paul, Minn.
William Codman Sturgis . . . . .	New York, N. Y.
Roland Thaxter . . . . .	Cambridge
William Trelease . . . . .	Urbana, Ill.
Charles Alfred Weatherby . . . . .	Cambridge
William Henry Weston, Jr. . . . .	Cambridge

CLASS II., SECTION III.—*Zoology and Physiology*.—67.

Nathan Banks . . . . .	Cambridge
Thomas Barbour . . . . .	Boston
Francis Gano Benedict . . . . .	Boston
Henry Bryant Bigelow . . . . .	Concord
Robert Payne Bigelow . . . . .	Brookline
William T. Bovie . . . . .	Chicago, Ill.
Edward Allen Boyden . . . . .	Minneapolis, Minn.
John Louis Bremer . . . . .	Boston
Charles Thomas Brues . . . . .	Jamaica Plain
John Wymond Miller Bunker . . . . .	Belmont
Walter Bradford Cannon . . . . .	Cambridge
Thorne Martin Carpenter . . . . .	Boston

William Ernest Castle . . . . .	Belmont
Charles Value Chapin . . . . .	Providence, R. I.
Benjamin Preston Clark . . . . .	Boston
Lemuel Roscoe Cleveland . . . . .	Jamaica Plain
Edwin Joseph Cohn . . . . .	Cambridge
Edwin Grant Conklin . . . . .	Princeton, N. J.
Manton Copeland . . . . .	Brunswick, Me.
William John Crozier . . . . .	Cambridge
Joseph Augustine Cushman . . . . .	Sharon
Charles Benedict Davenport . . . . .	Cold Spring Harbor, N. Y.
Hallowell Davis . . . . .	Cambridge
Samuel Randall Detwiler . . . . .	New York, N. Y.
Raymond Dodge . . . . .	New Haven, Conn.
Gilman Arthur Drew . . . . .	Eagle Lake, Fla.
Cecil Kent Drinker . . . . .	Boston
Herbert McLean Evans . . . . .	Berkeley, Cal.
Henry Clinton Fall . . . . .	Tyngsboro
Alexander Forbes . . . . .	Milton
William King Gregory . . . . .	New York, N. Y.
Joseph Grinnell . . . . .	Berkeley, Cal.
Samuel Henshaw . . . . .	Cambridge
Leigh Hoadley . . . . .	Cambridge
Samuel Jackson Holmes . . . . .	Berkeley, Cal.
Roy Graham Hoskins . . . . .	Brookline
Leland Ossian Howard . . . . .	Washington, D. C.
Herbert Spencer Jennings . . . . .	Baltimore, Md.
Charles Willison Johnson . . . . .	Brookline
Charles Atwood Kofoid . . . . .	Berkeley, Cal.
Frederic Thomas Lewis . . . . .	Waban
Ralph Stayner Lillie . . . . .	Chicago, Ill.
Richard Swann Lull . . . . .	New Haven, Conn.
Edward Laurens Mark . . . . .	Cambridge
Ernest Gale Martin . . . . .	Palo Alto, Cal.
Albert Davis Mead . . . . .	Providence, R. I.
Axel Leonard Melander . . . . .	New York, N. Y.
Gerrit Smith Miller . . . . .	Washington, D. C.
Thomas Hunt Morgan . . . . .	Pasadena, Cal.

Herbert Vincent Neal . . . . .	Tufts College
Henry Fairfield Osborn . . . . .	New York, N. Y.
George Howard Parker . . . . .	Cambridge
William Patten . . . . .	Hanover, N. H.
Raymond Pearl . . . . .	Baltimore, Md.
John Charles Phillips . . . . .	Wenham
Henry Augustus Pilsbry . . . . .	Philadelphia, Pa.
Frederick Haven Pratt . . . . .	Wellesley Hills
Herbert Wilbur Rand . . . . .	Cambridge
Arthur Clarence Redfield . . . . .	Boston
William Emerson Ritter . . . . .	Berkeley, Cal.
Alexander Grant Ruthven . . . . .	Ann Arbor, Mich.
Percy Goldthwait Stiles . . . . .	Newtonville
John Eliot Thayer . . . . .	Lancaster
Arthur Wisswald Weyssse . . . . .	Boston
William Morton Wheeler . . . . .	Boston
Edmund Beecher Wilson . . . . .	New York, N. Y.
Frederick Adams Woods . . . . .	Rome, Italy

CLASS II., SECTION IV.—*Medicine and Surgery*.—53.

Nathaniel Allison . . . . .	Boston
James Bourne Ayer . . . . .	Milton
George Blumer . . . . .	New Haven, Conn.
Charles Macfie Campbell . . . . .	Cambridge
Alexis Carrel . . . . .	New York, N. Y.
William Bosworth Castle . . . . .	Boston
David Cheever . . . . .	Boston
Henry Asbury Christian . . . . .	Boston
Stanley Cobb . . . . .	Milton
Rufus Cole . . . . .	New York, N. Y.
Harvey Cushing . . . . .	Brookline
Eugene Floyd DuBois . . . . .	New York, N. Y.
Simon Flexner . . . . .	New York, N. Y.
James Lawder Gamble . . . . .	Brookline
Joseph Lincoln Goodale . . . . .	Boston
Robert Battey Greenough . . . . .	Boston
Ross Granville Harrison . . . . .	New Haven, Conn.

Percy Rogers Howe . . . . .	Boston
William Henry Howell . . . . .	Baltimore, Md.
Reid Hunt . . . . .	Boston
Henry Jackson . . . . .	Boston
Elliott Proctor Joslin . . . . .	Boston
William Williams Keen . . . . .	Philadelphia, Pa.
Roger Irving Lee . . . . .	Brookline
Edwin Allen Locke . . . . .	Boston
Warfield Theobald Longcope . . . . .	Baltimore, Md.
Frank Burr Mallory . . . . .	Brookline
William James Mayo . . . . .	Rochester, Minn.
James Howard Means . . . . .	Boston
George Richards Minot . . . . .	Boston
William Lorenzo Moss . . . . .	Augusta, Ga.
John Howard Mueller . . . . .	Boston
Robert Bayley Osgood . . . . .	Boston
Joseph Hershey Pratt . . . . .	Boston
William Lambert Richardson . . . . .	Boston
Milton Joseph Rosenau . . . . .	Brookline
Andrew Watson Sellards . . . . .	Boston
Theobald Smith . . . . .	Princeton, N. J.
Torald Hermann Sollmann . . . . .	Cleveland, Ohio
Charles Wardell Stiles . . . . .	Washington, D. C.
Richard Pearson Strong . . . . .	Boston
Fritz Bradley Talbot . . . . .	Brookline
Edward Wyllys Taylor . . . . .	Boston
William Sydney Thayer . . . . .	Baltimore, Md.
Ernest Edward Tyzzer . . . . .	Wakefield
Frederick Herman Verhoeff . . . . .	Boston
Henry Pickering Walcott . . . . .	Cambridge
Joseph Treloar Wearn . . . . .	Cleveland, Ohio
William Henry Welch . . . . .	Baltimore, Md.
Benjamin White . . . . .	Boston
Francis Henry Williams . . . . .	Boston
Simeon Burt Wolbach . . . . .	Boston
Hans Zinsser . . . . .	Boston

CLASS III.—*The Social Arts*.—60.SECTION I.—*Jurisprudence*.—21.

George Weston Anderson . . . . .	Boston
Joseph Henry Beale . . . . .	Cambridge
William Harrison Dunbar . . . . .	Cambridge
Fred Tarbell Field . . . . .	Newton
Thomas Hovey Gage . . . . .	Worcester
Charles Evans Hughes . . . . .	Washington, D. C.
Nathan Isaacs . . . . .	Cambridge
Frederick Lawton . . . . .	Boston
William DeWitt Mitchell . . . . .	Washington, D. C.
Edmund Morris Morgan . . . . .	Arlington
Herbert Parker . . . . .	South Lancaster
George Wharton Pepper . . . . .	Philadelphia, Pa.
Roscoe Pound . . . . .	Watertown
Thomas Reed Powell . . . . .	Cambridge
Elihu Root . . . . .	New York, N. Y.
Arthur Prentice Rugg . . . . .	Worcester
George Augustus Sanderson . . . . .	Littleton
Austin Wakeman Scott . . . . .	Cambridge
William Cushing Wait . . . . .	Medford
Eugene Wambaugh . . . . .	Cambridge
George Woodward Wickersham . . . . .	New York, N. Y.

CLASS III., SECTION II.—*Government, International Law, and Diplomacy*.—13.

William Yandell Elliott . . . . .	Cambridge
Sidney Bradshaw Fay . . . . .	Cambridge
William Cameron Forbes . . . . .	Milton
Albert Bushnell Hart . . . . .	Cambridge
Arthur Norman Holcombe . . . . .	Cambridge
Manley Ottmer Hudson . . . . .	Cambridge
Abbott Lawrence Lowell . . . . .	Cambridge
William MacDonald . . . . .	New York, N. Y.
John Bassett Moore . . . . .	New York, N. Y.
William Bennett Munro . . . . .	Pasadena, Cal.
Westel Woodbury Willoughby . . . . .	Baltimore, Md.
George Grafton Wilson . . . . .	Cambridge
Quincy Wright . . . . .	Chicago, Ill.

CLASS III., SECTION III.—*Economics and Sociology*.—20.

John Donald Black . . . . .	Belmont
Charles Jesse Bullock . . . . .	Cambridge
Richard Clarke Cabot . . . . .	Cambridge
Thomas Nixon Carver . . . . .	Cambridge
John Bates Clark . . . . .	New York, N. Y.
Arthur Harrison Cole . . . . .	Cambridge
Melvin Thomas Copeland . . . . .	Cambridge
William Leonard Crum . . . . .	Cambridge
Clive Day . . . . .	New Haven, Conn.
Davis Rich Dewey . . . . .	Cambridge
Henry Walcott Farnam . . . . .	New Haven, Conn.
Irving Fisher . . . . .	New Haven, Conn.
James Ford . . . . .	Cambridge
Edwin Francis Gay . . . . .	Cambridge
Wesley Clair Mitchell . . . . .	New York, N. Y.
Warren Milton Persons . . . . .	New York, N. Y.
Pitirim Alexandrovich Sorokin . . . . .	Cambridge
Oliver Mitchell Wentworth Sprague . . . . .	Cambridge
Frank William Taussig . . . . .	Cambridge
Donald Skeelee Tucker . . . . .	Cambridge

CLASS III., SECTION IV.—*Administration and Affairs*.—6.

Ingersoll Bowditch . . . . .	Jamaica Plain
Richard Henry Dana . . . . .	Cambridge
Frank Johnson Goodnow . . . . .	Baltimore, Md.
Thomas Nelson Perkins . . . . .	Westwood
Herbert Putnam . . . . .	Washington, D. C.
Jeremiah Smith, Jr. . . . .	Cambridge

CLASS IV.—*The Humanities*.—155.SECTION I.—*Theology, Philosophy, and Psychology*.—33.

Edwin Garrigues Boring . . . . .	Cambridge
Edgar Sheffield Brightman . . . . .	Newton
Henry Addington Bruce . . . . .	Cambridge
Walter Fenno Dearborn . . . . .	Cambridge
Edmund Burke Delabarre . . . . .	Providence, R. I.

Edward Staples Drown . . . . .	Cambridge
William Wallace Fenn . . . . .	Cambridge
William Henry Paine Hatch . . . . .	Cambridge
William Arthur Heidel . . . . .	Middletown, Conn.
William Ernest Hocking . . . . .	Cambridge
Frederick John Foakes Jackson . . . . .	Englewood, N. J.
Truman Lee Kelley . . . . .	Cambridge
Albert Cornelius Knudson . . . . .	Cambridge
William Lawrence . . . . .	Boston
Clarence Irving Lewis . . . . .	Cambridge
William McDougall . . . . .	Durham, N. C.
Edward Caldwell Moore . . . . .	Cambridge
Paul Elmer More . . . . .	Princeton, N. J.
Johnson O'Connor . . . . .	Boston
George Herbert Palmer . . . . .	Cambridge
Charles Edwards Park . . . . .	Boston
Leighton Parks . . . . .	London, England
Francis Greenwood Peabody . . . . .	Cambridge
Ralph Barton Perry . . . . .	Cambridge
James Hardy Ropes . . . . .	Cambridge
James Hugh Ryan . . . . .	Washington, D. C.
Henry Knox Sherrill . . . . .	Boston
Willard Learoyd Sperry . . . . .	Cambridge
Russell Henry Stafford . . . . .	Brookline
Henry Bradford Washburn . . . . .	Cambridge
John Broadus Watson . . . . .	New York, N. Y.
James Haughton Woods . . . . .	Cambridge
Robert Mearns Yerkes . . . . .	New Haven, Conn.

CLASS IV., SECTION II.—*History, Archaeology, and Anthropology.*—35.

Charles McLean Andrews . . . . .	New Haven, Conn.
James Phinney Baxter, 3d . . . . .	Cambridge
Carl Lotus Becker . . . . .	Ithaca, N. Y.
Robert Pierpont Blake . . . . .	Cambridge
Franz Boas . . . . .	New York, N. Y.
George Henry Chase . . . . .	Cambridge
Roland Burrage Dixon . . . . .	Cambridge

Wilberforce Eames . . . . .	New York, N. Y.
Ephraim Emerton . . . . .	Cambridge
Max Farrand . . . . .	San Marino, Cal.
William Scott Ferguson . . . . .	Cambridge
Worthington Chauncey Ford . . . . .	Cambridge
Evarts Boutell Greene . . . . .	New York, N. Y.
Charles Homer Haskins . . . . .	Cambridge
Charles Downer Hazen . . . . .	New York, N. Y.
Bert Hodge Hill . . . . .	Athens, Greece
Earnest Albert Hooton . . . . .	Cambridge
Aleš Hrdlička . . . . .	Washington, D. C.
Alfred Vincent Kidder . . . . .	Washington, D. C.
Alfred Louis Kroeber . . . . .	Berkeley, Cal.
Kirsopp Lake . . . . .	Cambridge
George LaPiana . . . . .	Cambridge
Charles Howard Mellwain . . . . .	Cambridge
Roger Bigelow Merriman . . . . .	Cambridge
Samuel Eliot Morison . . . . .	Boston
George Andrew Reisner . . . . .	Boston
Michael Ivanovich Rostovtzeff . . . . .	New Haven, Conn.
George Sarton . . . . .	Cambridge
Arthur Meier Schlesinger . . . . .	Cambridge
Herbert Joseph Spinden . . . . .	Brooklyn, N. Y.
John Osborne Sumner . . . . .	Boston
Charles Cutler Torrey . . . . .	New Haven, Conn.
Alfred Marston Tozzer . . . . .	Cambridge
Frederick Jackson Turner . . . . .	San Marino, Cal.
Clark Wissler . . . . .	New York, N. Y.

CLASS IV., SECTION III.—*Philology*.—38.

Edward Cooke Armstrong . . . . .	Princeton, N. J.
Carl Darling Buck . . . . .	Chicago, Ill.
Eugene Watson Burlingame . . . . .	Albany, N. Y.
Edward Capps . . . . .	Princeton, N. J.
Walter Eugene Clark . . . . .	Cambridge
Samuel Hazzard Cross . . . . .	Cambridge
Franklin Edgerton . . . . .	New Haven, Conn.



Frank Edgar Farley . . . . .	Middletown, Conn.
Jeremiah Denis Mathias Ford . . . . .	Cambridge
James Geddes, Jr. . . . .	Brookline
Charles Hall Grandgent . . . . .	Cambridge
Louis Herbert Gray . . . . .	New York, N. Y.
William Chase Greene . . . . .	Cambridge
Charles Burton Gulick . . . . .	Cambridge
Roy Kenneth Hack . . . . .	Cincinnati, Ohio
Raymond Dexter Havens . . . . .	Baltimore, Md.
George Lincoln Hendrickson . . . . .	New Haven, Conn.
Elijah Clarence Hills . . . . .	Berkeley, Cal.
Edward Washburn Hopkins . . . . .	New Haven, Conn.
William Guild Howard . . . . .	Cambridge
Eugene Xavier Louis Henry Hyvernati . . . . .	Washington, D. C.
Carl Newell Jackson . . . . .	Cambridge
James Richard Jewett . . . . .	Cambridge
George Lyman Kittredge . . . . .	Cambridge
Henry Roseman Lang . . . . .	New Haven, Conn.
Charles Rockwell Lanman . . . . .	Cambridge
David Gordon Lyon . . . . .	Cambridge
Francis Peabody Magoun, Jr. . . . .	Cambridge
Albert Matthews . . . . .	Boston
William Albert Nitze . . . . .	Chicago, Ill.
Edward Kennard Rand . . . . .	Cambridge
Fred Norris Robinson . . . . .	Cambridge
Robert Kilburn Root . . . . .	Princeton, N. J.
Rudolph Schevill . . . . .	Berkeley, Cal.
Herbert Weir Smyth . . . . .	Cambridge
Franklin Bache Stephenson . . . . .	Washington, D. C.
Joshua Whatmough . . . . .	Cambridge
Ernest Hatch Wilkins . . . . .	Oberlin, Ohio

CLASS IV., SECTION IV.—*The Fine Arts and Belles Lettres*.—49.

Irving Babbitt . . . . .	Cambridge
George Pierce Baker . . . . .	New Haven, Conn.
Stephen Vincent Benét . . . . .	New York, N. Y.
Frank Weston Benson . . . . .	Salem

LeBaron Russell Briggs . . . . .	Cambridge
Frederick Shepherd Converse . . . . .	Westwood
Charles Allerton Coolidge . . . . .	Boston
Charles Townsend Copeland . . . . .	Cambridge
Ralph Adams Cram . . . . .	Boston
William Emerson . . . . .	Cambridge
John Erskine . . . . .	New York, N. Y.
Arthur Fairbanks . . . . .	Hanover, N. H.
Edward Waldo Forbes . . . . .	Cambridge
Robert Frost . . . . .	South Shaftsbury, Vt.
Wallace Goodrich . . . . .	Boston
Robert Grant . . . . .	Boston
Chester Noyes Greenough . . . . .	Cambridge
Edward Burlingame Hill . . . . .	Cambridge
Robert Silliman Hillyer . . . . .	Cambridge
William Henry Holmes . . . . .	Washington, D. C.
Charles Hopkinson . . . . .	Manchester
Mark Antony DeWolfe Howe . . . . .	Boston
Archer Milton Huntington . . . . .	New York, N. Y.
Henry James . . . . .	New York, N. Y.
John Ellerton Lodge . . . . .	Boston
Charles Martin Tornov Loeffler . . . . .	Medfield
John Livingston Lowes . . . . .	Cambridge
Charles Donagh Maginnis . . . . .	Brookline
Paul Manship . . . . .	New York, N. Y.
Daniel Gregory Mason . . . . .	New York, N. Y.
Frank Jewett Mather . . . . .	Princeton, N. J.
Harold Murdock . . . . .	Chestnut Hill
Kenneth Ballard Murdock . . . . .	Cambridge
William Allan Neilson . . . . .	Northampton
Curtis Hidden Page . . . . .	Gilmanton, N. H.
William Lyon Phelps . . . . .	New Haven, Conn.
Arthur Kingsley Porter . . . . .	Cambridge
Chandler Rathfon Post . . . . .	Cambridge
Edwin Arlington Robinson . . . . .	New York, N. Y.
Denman Waldo Ross . . . . .	Cambridge
Paul Joseph Sachs . . . . .	Cambridge

Ellery Sedgwick . . . . .	Boston
Henry Dwight Sedgwick . . . . .	Boston
Richard Clipston Sturgis . . . . .	Boston
Edmund C. Tarbell . . . . .	Boston
Charles Howard Walker . . . . .	Boston
George Parker Winship . . . . .	Charles River
Owen Wister . . . . .	Philadelphia, Pa.
Charles Henry Conrad Wright . . . . .	Cambridge

## ASSOCIATES.—26.

Charles Francis Adams . . . . .	Concord
Francis Noyes Balch . . . . .	Jamaica Plain
Franklin Greene Balch . . . . .	Boston
Charles Foster Batchelder . . . . .	Cambridge
Frederick Pickering Cabot . . . . .	Boston
William Brooks Cabot . . . . .	Boston
John Candler Cobb . . . . .	Milton
Howard Coonley . . . . .	Milton
John Albert Cousens . . . . .	Tufts College
William Lusk Webster Field . . . . .	Milton
Francis Russell Hart . . . . .	Boston
Edward Jackson Holmes . . . . .	Boston
William James . . . . .	Cambridge
Nathaniel Thayer Kidder . . . . .	Milton
Everett Morss . . . . .	Boston
Robert Lincoln O'Brien . . . . .	Dedham
Andrew James Peters . . . . .	Jamaica Plain
Anthony John Philpott . . . . .	Arlington
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CLASS I.—*Mathematical and Physical Sciences*.—33.SECTION I.—*Mathematics and Astronomy*.—9.

Arthur Stanley Eddington . . . . .	Cambridge, England
Jacques Salomon Hadamard. . . . .	Paris
Godfrey Harold Hardy . . . . .	Cambridge, England
Ejnar Hertzsprung . . . . .	Leyden
Tullio Levi-Civita . . . . .	Rome
Charles Emile Picard. . . . .	Paris
Willem de Sitter . . . . .	Leyden
Charles Jean de la Vallée Poussin . . . . .	Louvain
Hermann Weyl . . . . .	Zürich

CLASS I., SECTION II.—*Physics*.—9.

Vilhelm Frimann Koren Bjerknes . . . . .	Oslo
Albert Einstein . . . . .	Berlin
James Franck . . . . .	Berlin
Abram F. Joffé . . . . .	Leningrad
Sir Joseph Larmor . . . . .	Cambridge, England
Friedrich Paschen. . . . .	Charlottenburg
Max Planck . . . . .	Berlin
Sir Ernest Rutherford. . . . .	Cambridge, England
Sir Joseph John Thomson . . . . .	Cambridge, England

CLASS I., SECTION III.—*Chemistry*.—8.

Johannes N. Brönsted . . . . .	Copenhagen
Peter Debye . . . . .	Zürich
Fritz Haber . . . . .	Berlin
Henri Louis Le Chatelier . . . . .	Paris
Archibald Byron Macallum . . . . .	London, Ontario
Wilhelm Ostwald . . . . .	Leipzig
Sören Peter Lauritz Sörensen . . . . .	Copenhagen
Heinrich Wieland . . . . .	Munich

CLASS I., SECTION IV.—*Technology and Engineering*.—7.

Maurice d'Ocagne . . . . .	Paris
Ludwig Prandtl . . . . .	Göttingen
Emil Probst . . . . .	Karlsruhe
Aurel Stodola . . . . .	Zürich
Vsevolod Evgenievich Timonoff . . . . .	Leningrad
William Cawthorne Unwin . . . . .	London
Karl Willy Wagner . . . . .	Berlin

CLASS II.—*Natural and Physiological Sciences*.—31.SECTION I.—*Geology, Mineralogy, and Physics of the Globe*.—10.

Frank Dawson Adams . . . . .	Montreal
Charles Barrois . . . . .	Lille
Waldemar Christofer Brögger . . . . .	Oslo
Léon William Collet . . . . .	Geneva
Viktor Goldschmidt . . . . .	Heidelberg
Albert Heim . . . . .	Zürich
Emmanuel de Margerie . . . . .	Paris
Gustaf Adolf Frederik Molengraaff . . . . .	Delft
Sir William Napier Shaw . . . . .	London
Johan Herman Lie Vogt . . . . .	Trondhjem

CLASS II., SECTION II.—*Botany*.—4.

Ludwig Diels . . . . .	Berlin
Alfred Barton Rendle . . . . .	London
Otto Renner . . . . .	Jena
Hugo de Vries . . . . .	Luntern

CLASS II., SECTION III.—*Zoology and Physiology*.—9.

Francis Arthur Bather . . . . .	London
George Albert Boulenger . . . . .	Brussels
Maurice Caullery . . . . .	Paris
Wolfgang Köhler . . . . .	Berlin
August Krogh . . . . .	Copenhagen
Louis Édouard Lapicque . . . . .	Paris
George Henry Falkiner Nuttall . . . . .	Cambridge, England
Charles Tate Regan . . . . .	London
D'Arcy Wentworth Thompson . . . . .	St. Andrews

CLASS II., SECTION IV.—*Medicine and Surgery*.—8.

Sir Thomas Barlow, Bart.	London
Henry Hallett Dale	London
Sir Robert Jones, Bart.	Liverpool
Mikinosuke Miyajima	Tokyo
Friedrich von Müller	Munich
Francis John Shepherd	Montreal
Sir Charles Scott Sherrington	Oxford
Sir Arnold Theiler	London

CLASS III.—*The Social Arts*.—7.SECTION I.—*Jurisprudence*.—3.

Léon Duguit	Bordeaux
Rt. Hon. Sir Frederick Pollock, Bart.	London
Joseph Redlich	Vienna

SECTION II.—*Government, International Law, and Diplomacy*.—1.

Jean Adrien Antoine Jules Jusserand	Paris
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SECTION III.—*Economics and Sociology*.—1.

Arthur Cecil Pigou	Cambridge, England
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SECTION IV.—*Administration and Affairs*.—2.

Raymond Poincaré	Paris
Rufus Daniel Isaacs, Marquess of Reading	London

CLASS IV.—*The Humanities*.—30.SECTION I.—*Theology, Philosophy, and Psychology*.—5.

Henri Louis Bergson	Paris
Francis Crawford Burkitt	Cambridge, England
Benedetto Croce	Naples
Étienne Gilson	Melun, France
Edmund Husserl	Freiburg i. B.

SECTION II.—*History, Archaeology, and Anthropology*.—8.

Godfrey Rathbone Benson, Baron Charnwood	Lichfield
Wilhelm Dörpfeld	Berlin-Lichterfelde

Rt. Hon. Herbert Albert Laurens Fisher . . . . .	Oxford
Karl Pearson . . . . .	London
Henri Pirenne . . . . .	Uccle-Brussels
Sir Aurel Stein . . . . .	Srinagar, Kashmir
Charles Sanford Terry . . . . .	Aberdeen
George Macaulay Trevelyan . . . . .	Cambridge, England

SECTION III.—*Philology*.—8.

Joseph Bédier . . . . .	Paris
Robert Seymour Conway . . . . .	St. Albans
Hermann Georg Jacobi . . . . .	Bonn
Sylvain Lévi . . . . .	Paris
Arthur Anthony Macdonell . . . . .	Oxford
Antoine Meillet . . . . .	Paris
Hanns Oertel . . . . .	Munich
Ramón Menéndez Pidal . . . . .	Madrid

SECTION IV.—*The Fine Arts and Belles Lettres*.—9.

Alfredo Casella . . . . .	Rome
John Galsworthy . . . . .	London
Henry Guy . . . . .	Grenoble
Paul Hazard . . . . .	Paris
Rudyard Kipling . . . . .	Burwash, Sussex
Victor Laloux . . . . .	Paris
Gilbert Murray . . . . .	Oxford
Edgar Allison Peers . . . . .	Liverpool
Henri Rabaud . . . . .	Paris

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The letters A, F, and FHM refer to the lists of Associates, Fellows, and Foreign Honorary Members, respectively. The class and section are indicated by the numerals following.

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 Jacobi, H. G. FHM, IV: 3  
 Jacques, W. W. F, I: 2

- Jaggar, T. A. F, II: 1  
 James, H. F, IV: 4  
 James, W. A  
 Jeffrey, E. C. F, II: 2  
 Jennings, H. S. F, II: 3  
 Jennings, W. L. F, I: 3  
 Jepson, W. L. F, II: 2  
 Jewett, F. B. F, I: 4  
 Jewett, J. R. F, IV: 3  
 Joffé, A. F. FHM, I: 2  
 Johnson, C. W. F, II: 3  
 Johnson, D. W. F, II: 1  
 Johnson, L. J. F, I: 4  
 Johnston, I. M. F, II: 2  
 Jones, G. F, I: 3  
 Jones, Sir R. FHM, II: 4  
 Joslin, E. P. F, II: 4  
 Jusserand, J. A. A. J. FHM, III: 2  
 Keen, W. W. F, II: 4  
 Keith, A. F, II: 1  
 Kelley, T. L. F, IV: 1  
 Kellogg, O. D. F, I: 1  
 Kemble, E. C. F, I: 2  
 Kennelly, A. E. F, I: 4  
 Kent, N. A. F, I: 2  
 Keyes, F. G. F, I: 3  
 Kidder, A. V. F, IV: 2  
 Kidder, N. T. A  
 Kipling, R. FHM, IV: 4  
 Kittredge, G. L. F, IV: 3  
 Knudson, A. C. F, IV: 1  
 Köhler, W. FHM, II: 3  
 Kofoid, C. A. F, II: 3  
 Kohler, E. P. F, I: 3  
 Kraus, C. A. F, I: 3  
 Kroeber, A. L. F, IV: 2  
 Krogh, A. FHM, II: 3  
 Lake, K. F, III: 2  
 Laloux, V. FHM, IV: 4  
 Lamb, A. B. F, I: 3  
 Lampland, C. O. F, I: 1  
 Lane, A. C. F, II: 1  
 Lang, H. R. F, IV: 3  
 Langmuir, I. F, I: 3  
 Lanman, C. R. F, IV: 3  
 La Piana, G. F, IV: 2  
 Lapicque, L. E. FHM, II: 3  
 Larmor, Sir J. FHM, I: 2  
 Larsen, E. S. F, II: 1  
 Lawrence, W. F, IV: 1  
 Lawrence, W. H. F, I: 4  
 Laws, F. A. F, I: 2  
 Lawson, A. C. F, II: 1  
 Lawton, F. F, III: 1  
 Le Chatelier, H. L. FHM, I: 3  
 Lee, R. I. F, II: 4  
 Lefavour, H. F, I: 2  
 Leith, C. K. F, II: 1  
 Lévi, S. FHM, IV: 3  
 Levi-Civita, T. FHM, I: 1  
 Lewis, C. I. F, IV: 1  
 Lewis, F. T. F, II: 3  
 Lewis, G. N. F, I: 3  
 Lewis, W. K. F, I: 3  
 Lillie, R. S. F, II: 3  
 Lindgren, W. F, II: 1  
 Lindsay, R. B. F, I: 2  
 Lipman, J. G. F, II: 2  
 Little, A. D. F, I: 3  
 Livingston, B. E. F, II: 2  
 Locke, E. A. F, II: 4  
 Lodge, J. E. F, IV: 4  
 Loeffler, C. M. T. F, IV: 4  
 Longcope, W. T. F, II: 4  
 Loomis, F. B. F, II: 1  
 Lowell, A. L. F, III: 2  
 Lowes, J. L. F, IV: 4  
 Lull, R. S. F, II: 3  
 Luyten, W. J. F, I: 1  
 Lyman, T. F, I: 2  
 Lyon, D. G. F, IV: 3  
 McAdie, A. G. F, II: 1  
 Macallum, A. B. FHM, I: 3  
 MacDonald, W. F, III: 2  
 Macdonell, A. A. FHM, IV: 3  
 McDougall, W. F, IV: 1  
 McEwen, G. F. F, II: 1  
 Mellwain, C. H. F, IV: 2

- MacInnes, D. A. F, I: 3  
 McLaughlin, D. H. F, II: 1  
 Maginnis, C. D. F, IV: 4  
 Magoun, F. P., Jr. F, IV: 3  
 Main, C. T. F, I: 4  
 Mallory, F. B. F, II: 4  
 Manship, P. F, IV: 4  
 Margerie, E. de. FHM, II: 1  
 Mark, E. L. F, II: 3  
 Marks, L. S. F, I: 4  
 Martin, E. G. F, II: 3  
 Mason, D. G. F, IV: 4  
 Mather, F. J. F, IV: 4  
 Mather, K. F. F, II: 1  
 Mathews, E. B. F, II: 1  
 Matthews, A. F, IV: 3  
 Mayo, W. J. F, II: 4  
 Mead, A. D. F, II: 3  
 Means, J. H. F, II: 4  
 Meillet, A. FHM, IV: 3  
 Melander, A. L. F, II: 3  
 Mendel, L. B. F, I: 3  
 Merriam, J. C. F, II: 1  
 Merrill, E. D. F, II: 2  
 Merriman, R. B. F, IV: 2  
 Merritt, E. G. F, I: 2  
 Miller, D. C. F, I: 2  
 Miller, E. F. F, I: 4  
 Miller, G. A. F, I: 1  
 Miller, G. S. F, II: 3  
 Miller, J. A. F, I: 1  
 Miller, W. J. F, II: 1  
 Millikan, R. A. F, I: 2  
 Minot, G. R. F, II: 4  
 Mitchell, S. A. F, I: 1  
 Mitchell, W. C. F, III: 3  
 Mitchell, W. DeW. F, III: 1  
 Miyajima, M. FHM, II: 4  
 Molengraaff, G. A. F. FHM, II: 1  
 Moore, E. C. F, IV: 1  
 Moore, E. H. F, I: 1  
 Moore, J. B. F, III: 2  
 More, P. E. F, IV: 1  
 Morgan, E. M. F, III: 1  
 Morgan, T. H. F, II: 3  
 Morison, S. E. F, IV: 2  
 Morley, F. F, I: 1  
 Morse, H. W. F, I: 2  
 Morse, M. F, I: 1  
 Morss, E. A  
 Moss, W. L. F, II: 4  
 Moulton, F. R. F, I: 1  
 Mueller, E. F, I: 3  
 Müller, F. von. FHM, II: 4  
 Mueller, J. H. F, II: 4  
 Mulliken, S. P. F, I: 3  
 Munro, W. B. F, III: 2  
 Munroe, C. E. F, I: 3  
 Murdock, H. F, IV: 4  
 Murdock, K. B. F, IV: 4  
 Murray, G. FHM, IV: 4  
 Neal, H. V. F, II: 3  
 Neilson, W. A. F, IV: 4  
 Newell, L. C. F, I: 3  
 Nichols, E. L. F, I: 2  
 Nitze, W. A. F, IV: 3  
 Norris, J. F. F, I: 3  
 Norton, C. L. F, I: 2  
 Noyes, A. A. F, I: 3  
 Noyes, W. A. F, I: 3  
 Noyes, W. A., Jr. F, I: 3  
 Nuttall, G. H. F. FHM, II: 3  
 O'Brien, R. L. A  
 d'Ocagne, M. FHM, I: 4  
 O'Connor, J. F, IV: 1  
 Oertel, H. FHM, IV: 3  
 Oldenberg, O. F, I: 2  
 Olmsted, F. L. F, I: 4  
 Osborn, H. F. F, II: 3  
 Osgood, R. B. F, II: 4  
 Osterhout, W. J. V. F, II: 2  
 Ostwald, W. FHM, I: 3  
 Page, C. H. F, IV: 4  
 Palache, C. F, II: 1  
 Palmer, G. H. F, IV: 1  
 Park, C. E. F, IV: 1  
 Park, C. F. F, I: 4  
 Parker, G. H. F, II: 3

- Parker, H. F, III: 1  
 Parks, L. F, IV: 1  
 Parsons, W. B. F, I: 4  
 Paschen, F. FHM, I: 2  
 Patten, W. F, II: 3  
 Peabody, F. G. F, IV: 1  
 Pearl, R. F, II: 3  
 Pearse, L. F, I: 4  
 Pearson, K. FHM, IV: 2  
 Peers, E. A. FHM, IV: 4  
 Peirce, G. J. F, II: 2  
 Pender, H. F, I: 4  
 Pepper, G. W. F, III: 1  
 Perkins, T. N. F, III: 4  
 Perry, R. B. F, IV: 1  
 Persons, W. M. F, III: 3  
 Peters, A. J. A  
 Phelps, W. L. F, IV: 4  
 Phillips, H. B. F, I: 1  
 Phillips, J. C. F, II: 3  
 Philpott, A. J. A  
 Picard, C. E. FHM, I: 1  
 Pickard, G. W. F, I: 4  
 Pickering, W. H. F, I: 1  
 Pidal, R. M. FHM, IV: 3  
 Pierce, G. W. F, I: 2  
 Pigou, A. C. FHM, III: 3  
 Pilsbry, H. A. F, II: 3  
 Pirenne, H. FHM, IV: 2  
 Planck, M. FHM, I: 2  
 Plaskett, H. H. F, I: 1  
 Poincaré, R. FHM, III: 4  
 Pollock, Sir F. FHM, III: 1  
 Poor, C. L. F, I: 1  
 Porter, A. K. F, IV: 4  
 Post, C. R. F, IV: 4  
 Pound, R. F, III: 1  
 Powell, T. R. F, III: 1  
 Prandtl, L. FHM, I: 4  
 Pratt, F. H. F, II: 3  
 Pratt, J. H. F, II: 4  
 Prescott, S. C. F, I: 3  
 Probst, E. FHM, I: 4  
 Pupin, M. I. F, I: 2  
 Putnam, H. F, III: 4  
 Rabaud, H. FHM, IV: 4  
 Rand, E. K. F, IV: 3  
 Rand, H. W. F, II: 3  
 Raymond, P. E. F, II: 1  
 Reading, Lord. FHM, III: 4  
 Redfield, A. C. F, II: 3  
 Redlich, J. FHM, III: 1  
 Regan, C. T. FHM, II: 3  
 Rehder, A. F, II: 2  
 Reisner, G. A. F, IV: 2  
 Rendle, A. B. FHM, II: 2  
 Renner, O. FHM, II: 2  
 Richards, R. H. F, I: 3  
 Richardson, R. G. D. F, I: 1  
 Richardson, W. L. F, II: 4  
 Ripley, A. L. A  
 Ritter, W. E. F, II: 3  
 Roberts, O. A  
 Robinson, B. L. F, II: 2  
 Robinson, E. A. F, IV: 4  
 Robinson, F. N. F, IV: 3  
 Rogers, A. F. F, II: 1  
 Root, E. F, III: 1  
 Root, R. K. F, IV: 3  
 Ropes, J. H. F, IV: 1  
 Rosanoff, M. A. F, I: 3  
 Rosenau, M. J. F, II: 4  
 Ross, D. W. F, IV: 4  
 Rostovtzeff, M. I. F, IV: 2  
 Rowe, A. W. F, I: 3  
 Rugg, A. P. F, III: 1  
 Russell, G. E. F, I: 4  
 Russell, H. N. F, I: 1  
 Rutherford, Sir E. FHM, I: 2  
 Ruthven, A. G. F, II: 3  
 Rutledge, G. F, I: 1  
 Ryan, J. H. F, IV: 1  
 Sachs, P. J. F, IV: 4  
 Sanderson, G. A. F, III: 1  
 Sarton, G. F, IV: 2  
 Saunders, F. A. F, I: 2  
 Sauveur, A. F, I: 4  
 Sax, K. F, II: 2

- Sayles, R. W. F, II: 1  
 Scatchard, G. F, I: 3  
 Schaller, W. T. F, II: 1  
 Schevill, R. F, IV: 3  
 Schlesinger, A. M. F, IV: 2  
 Schlesinger, F. F, I: 1  
 Schuchert, C. F, II: 1  
 Scott, A. W. F, III: 1  
 Scott, W. B. F, II: 1  
 Sedgwick, E. F, IV: 4  
 Sedgwick, H. D. F, IV: 4  
 Sellards, A. W. F, II: 4  
 Setchell, W. A. F, II: 2  
 Seymour, A. B. F, II: 2  
 Shapley, H. F, I: 1  
 Shaw, Sir W. N. FHM, II: 1  
 Shepherd, F. J. FHM, II: 4  
 Sherrill, H. K. F, IV: 1  
 Sherrill, M. S. F, I: 3  
 Sherrington, Sir C. S. FHM, II: 4  
 Shimer, H. W. F, II: 1  
 Sims, W. S. F, I: 4  
 Sitter, W. de. FHM, I: 1  
 Slater, J. C. F, I: 2  
 Slipher, V. M. F, I: 1  
 Slocum, F. F, I: 1  
 Smith, H. M. F, I: 3  
 Smith, J., Jr. F, III: 4  
 Smith, P. A  
 Smith, T. F, II: 4  
 Smyth, H. L. F, I: 4  
 Smyth, H. W. F, IV: 3  
 Snyder, V. F, I: 1  
 Sörensen, S. P. L. FHM, I: 3  
 Sollmann, T. H. F, II: 4  
 Sorokin, P. A. F, III: 3  
 Sperry, W. L. F, IV: 1  
 Spinden, H. J. F, IV: 2  
 Spofford, C. M. F, I: 4  
 Sprague, O. M. W. F, III: 3  
 Stafford, R. H. F, IV: 1  
 Stakman, E. C. F, II: 2  
 Stebbins, J. F, I: 1  
 Stein, Sir A. FHM, IV: 2  
 Stephenson, F. B. F, IV: 3  
 Stetson, H. T. F, I: 1  
 Stevens, J. F. F, I: 4  
 Stieglitz, J. O. F, I: 3  
 Stiles, C. W. F, II: 4  
 Stiles, P. G. F, II: 3  
 Stodola, A. FHM, I: 4  
 Stone, J. S. F, I: 2  
 Strong, R. P. F, II: 4  
 Struik, D. J. F, I: 1  
 Sturgis, R. C. F, IV: 4  
 Sturgis, W. C. F, II: 2  
 Sumner, J. O. F, IV: 2  
 Taber, H. F, I: 1  
 Talbot, F. B. F, II: 4  
 Tamarkin, J. D. F, I: 1  
 Tarbell, E. C. F, IV: 4  
 Taussig, F. W. F, III: 3  
 Taylor, C. H. A  
 Taylor, E. W. F, II: 4  
 Taylor, F. B. F, II: 1  
 Terry, C. S. FHM, IV: 2  
 Thaxter, R. F, II: 2  
 Thayer, J. E. F, II: 3  
 Thayer, W. S. F, II: 4  
 Theiler, Sir A. FHM, II: 4  
 Thompson, D'A. W. FHM, II: 3  
 Thompson, M. deK. F, I: 2  
 Thomson, E. F, I: 2  
 Thomson, Sir J. J. FHM, I: 2  
 Timonoff, V. E. FHM, I: 4  
 Tolman, R. C. F, I: 3  
 Torrey, C. C. F, IV: 2  
 Tozzer, A. M. F, IV: 2  
 Trelease, W. F, II: 2  
 Trevelyan, G. M. FHM, IV: 2  
 Tucker, D. S. F, III: 3  
 Turner, F. J. F, IV: 2  
 Tyler, H. W. F, I: 1  
 Tyzzer, E. E. F, II: 4  
 Unwin, W. C. FHM, I: 4  
 Vallarta, M. S. F, I: 2  
 Vallée Poussin, C. J. de la. FHM, I: 1  
 Vaughan, T. W. F, II: 1

- Veblen, O. F, I: 1  
Verhoeff, F. H. F, II: 4  
Vogt, J. H. L. FHM, II: 1  
Vries, H. de. FHM, II: 2  
Wadsworth, E. A  
Wagner, K. W. FHM, I: 4  
Wait, W. C. F, III: 1  
Walcott, H. P. F, II: 4  
Walker, C. H. F, IV: 4  
Walker, W. H. F, I: 3  
Walsh, J. L. F, I: 1  
Wambaugh, E. F, III: 1  
Warner, E. P. F, I: 4  
Warren, C. H. F, II: 1  
Washburn, H. B. F, IV: 1  
Watson, J. B. F, IV: 1  
Wearn, J. T. F, II: 4  
Weatherby, C. A. F, II: 2  
Webster, D. L. F, I: 2  
Webster, E. S. A  
Welch, W. H. F, II: 4  
Wells, A. E. F, I: 4  
Weston, R. S. F, I: 4  
Weston, W. H. F, II: 2  
Weyl, H. FHM, I: 1  
Weysse, A. W. F, II: 3  
Whatmough, J. F, IV: 3  
Wheeler, W. M. F, II: 3  
White, B. F, II: 4  
White, D. F, II: 1  
Whitehead, A. N. F, I: 1  
Whitlock, H. P. F, II: 1  
Whitman, E. A. A  
Whitney, W. R. F, I: 3  
Wickersham, G. W. F, III: 1  
Wieland, H. FHM, I: 3  
Wilkins, E. H. F, IV: 3  
Williams, F. H. F, II: 4  
Williams, R. S. F, I: 3  
Willis, B. F, II: 1  
Willoughby, W. W. F, III: 2  
Wilson, E. B. F, II: 3  
Wilson, E. B. F, I: 2  
Wilson, G. G. F, III: 2  
Winship, G. P. F, IV: 4  
Winslow, A. F, II: 1  
Wissler, C. F, IV: 2  
Wister, O. F, IV: 4  
Wolbach, S. B. F, II: 4  
Wolff, J. E. F, II: 1  
Wood, R. W. F, I: 2  
Woodman, A. G. F, I: 3  
Woods, F. A. F, II: 3  
Woods, F. S. F, I: 1  
Woods, J. H. F, IV: 1  
Worcester, J. R. F, I: 4  
Wright, C. H. C. F, IV: 4  
Wright, F. E. F, II: 1  
Wright, Q. F, III: 2  
Yerkes, R. M. F, IV: 1  
Young, B. L. A  
Zeleny, J. F, I: 2  
Zinsser, H. F, II: 4



## STATUTES AND STANDING VOTES.

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### STATUTES.

*Adopted November 8, 1911: amended May 8, 1912, January 8, and May 14, 1913, April 14, 1915, April 12, 1916, April 10, 1918, May 14, 1919, February 8, April 12, and December 13, 1922, February 14, March 14, and October 10, 1923, March 10, 1926, May 9, 1928, April 8, 1931, and November 11, 1931.*

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### CHAPTER I.

#### THE CORPORATE SEAL.

ARTICLE 1. The Corporate Seal of the Academy shall be as here depicted:



ARTICLE 2. The Recording Secretary shall have the custody of the Corporate Seal.

*See Chap. v, art. 3; chap. vi, art. 2.*

## CHAPTER II.

## FELLOWS AND FOREIGN HONORARY MEMBERS AND DUES.

ARTICLE 1. The Academy consists of Fellows, who are either citizens or residents of the United States of America, and Foreign Honorary Members. They are arranged in four Classes, according to the Arts and Sciences in which they are severally proficient, and each Class is divided into four Sections, namely:

CLASS I. *The Mathematical and Physical Sciences*

- Section 1. Mathematics and Astronomy
- Section 2. Physics
- Section 3. Chemistry
- Section 4. Technology and Engineering

CLASS II. *The Natural and Physiological Sciences*

- Section 1. Geology, Mineralogy, and Physics of the Globe
- Section 2. Botany
- Section 3. Zoölogy and Physiology
- Section 4. Medicine and Surgery

CLASS III. *The Social Arts*

- Section 1. Jurisprudence
- Section 2. Government, International Law, and Diplomacy
- Section 3. Economics and Sociology
- Section 4. Administration and Affairs

CLASS IV. *The Humanities*

- Section 1. Theology, Philosophy, and Psychology
- Section 2. History, Archæology, and Anthropology
- Section 3. Philology
- Section 4. The Fine Arts and Belles Lettres

ARTICLE 2. The number of Fellows shall not exceed Eight hundred, of whom not more than Six hundred shall be residents of Massachusetts, nor shall there be more than Two hundred and ten in any one Class.

ARTICLE 3. The number of Foreign Honorary Members shall not exceed One hundred and thirty. They shall be chosen from among

citizens of foreign countries most eminent for their discoveries and attainments in any of the Classes above enumerated. There shall not be more than Thirty-five in any one Class.

ARTICLE 4. If any person, after being notified of his election as Fellow, shall neglect for six months to accept in writing, or, if a Fellow resident within fifty miles of Boston shall neglect to pay his Admission Fee, his election shall be void; and if any Fellow resident within fifty miles of Boston shall neglect to pay his Annual Dues for six months after they are due, provided his attention shall have been called to this Article of the Statutes in the meantime, he shall cease to be a Fellow; but the Council may suspend the provisions of this Article for a reasonable time.

With the previous consent of the Council, the Treasurer may dispense (*sub silentio*) with the payment of the Admission Fee or of the Annual Dues or both whenever he shall deem it advisable. In the case of officers of the Army or Navy who are out of the Commonwealth on duty, payment of the Annual Dues may be waived during such absence if continued during the whole financial year and if notification of such expected absence be sent to the Treasurer. Upon similar notification to the Treasurer, similar exemption may be accorded to Fellows subject to Annual Dues, who may temporarily remove their residence for at least two years to a place more than fifty miles from Boston.

If any person elected a Foreign Honorary Member shall neglect for six months after being notified of his election to accept in writing, his election shall be void.

*See Chap. vii, art. 2.*

ARTICLE 5. Every Fellow resident within fifty miles of Boston hereafter elected shall pay an Admission Fee of Ten dollars, unless previously as an Associate he has paid an Admission Fee of like amount.

Every Fellow resident within fifty miles of Boston shall, and others may, pay such Annual Dues, not exceeding Fifteen dollars, as shall be voted by the Academy at each Annual Meeting, when they shall become due; but any Fellow shall be exempt from the annual payment if, at any time after his admission, he shall pay into the treasury

Two hundred dollars in addition to his previous payments. Any Fellow shall also be exempt from Annual Dues who has paid such dues for forty years, or, having attained the age of seventy-five has paid dues for twenty-five years.

All Commutations of the Annual Dues shall be and remain permanently funded, the interest only to be used for current expenses.

Any fellow not previously subject to Annual Dues who takes up his residence within fifty miles of Boston, shall pay to the Treasurer within three months thereafter Annual Dues for the current year, failing which his Fellowship shall cease; but the Council may suspend the provisions of this Article for a reasonable time.

Only Fellows who pay Annual Dues or have commuted them may hold office in the Academy or serve on the Standing Committees or vote at meetings.

ARTICLE 6. Fellows who pay or have commuted the Annual Dues and Foreign Honorary Members shall be entitled to receive gratis one copy of all Publications of the Academy issued after their election.

*See Chap. xi, art. 2.*

ARTICLE 7. Diplomas signed by the President and the Vice-President of the Class to which the member belongs, and countersigned by the Secretaries, shall be given to Foreign Honorary Members and to Fellows on request.

ARTICLE 8. If, in the opinion of a majority of the entire Council, any Fellow or Foreign Honorary Member shall have rendered himself unworthy of a place in the Academy, the Council shall recommend to the Academy the termination of his membership; and if three-fourths of the Fellows present, out of a total attendance of not less than fifty at a Stated Meeting, or at a Special Meeting called for the purpose, shall adopt this recommendation, his name shall be stricken from the Roll.

*See Chap. iii; chap. vi, art. 1; chap. x, art. 1, 7; chap. xi, art. 2.*

### CHAPTER III.

#### ELECTION OF FELLOWS AND FOREIGN HONORARY MEMBERS.

The procedure in the election of Fellows and Foreign Honorary Members shall be as follows:

Nominations to Fellowship or Foreign Honorary Membership in any Section must be signed by Two Fellows of that Section, or by three Fellows of any Sections, and sent to the Corresponding Secretary accompanied by a statement of the qualifications of the nominee and brief biographical data.

Notice shall be sent to every Fellow not later than the fifteenth of January in each year, reminding him that all nominations must be in the hands of the Corresponding Secretary before the fifteenth of February following.

A list of the nominees, giving a brief account of each, with the names of the nominators, shall be sent to every Fellow with a request that he return the list with such confidential comments and indications of preference as he may choose to make.

All the nominations, with any comments thereon and with expressions of preference on the part of the Fellows, shall be referred to the appropriate Class Committees, which shall canvass them, and report their recommendations in writing to the Council before the Stated Meeting of the Academy in April.

Elections of Fellows and Foreign Honorary Members shall be made by the Council before the Annual Meeting in May, and announced at that meeting.

Persons nominated in any year, but not elected, may be carried over to the list of nominees for the next year at the discretion of the Council, but shall not be further continued unless renominated.

*See Chap. ii; chap. vi, art. 1; chap. x, art. 1.*

## CHAPTER IV.

### OFFICERS.

ARTICLE 1. The Officers of the Academy shall be a President (who shall be Chairman of the Council), four Vice-Presidents (one from each Class), a Corresponding Secretary (who shall be Secretary of the Council), a Recording Secretary, a Treasurer, a Librarian, and an Editor, all of whom shall be elected by ballot at the Annual Meeting, and shall hold their respective offices for one year, and until others are duly chosen and installed.

There shall be also sixteen Councillors, one from each Section of

each Class. At each Annual Meeting four Councillors, one from each Class, shall be elected by ballot to serve for the full term of four years and until others are duly chosen and installed. The same Fellow shall not be eligible for two successive terms.

The Councillors, with the other officers previously named, and the Chairman of the House Committee, *ex officio*, shall constitute the Council.

*See Chap. xi, art. 1.*

ARTICLE 2. If any officer be unable, through death, absence, or disability, to fulfill the duties of his office, or if he shall resign, his place may be filled by the Council in its discretion for any part or the whole of the unexpired term.

ARTICLE 3. At the Stated Meeting in March, the President shall appoint a Nominating Committee of Four Fellows having the right to vote, one from each Class. This Committee shall prepare a list of nominees for the several offices to be filled, and for the Standing Committees, and file it with the Recording Secretary not later than four weeks before the Annual Meeting.

*See Chap. vi, art. 2.*

ARTICLE 4. Independent nominations for any office, if signed by at least twenty Fellows having the right to vote, and received by the Recording Secretary not less than ten days before the Annual Meeting, shall be inserted in the call therefor, and shall be mailed to all the Fellows having the right to vote.

*See Chap. vi, art. 2.*

ARTICLE 5. The Recording Secretary shall prepare for use in voting at the Annual Meeting a ballot containing the names of all persons duly nominated for office.

## CHAPTER V.

### THE PRESIDENT.

ARTICLE 1. The President, or in his absence the senior Vice-President present (seniority to be determined by length of continuous fellowship in the Academy), shall preside at all meetings of the Acad-

emy. In the absence of all these officers, a Chairman of the meeting shall be chosen by ballot.

ARTICLE 2. Unless otherwise ordered, all Committees which are not elected by ballot shall be appointed by the presiding officer.

ARTICLE 3. Any deed or writing to which the Corporate Seal is to be affixed, except leases of real estate, shall be executed in the name of the Academy by the President or, in the event of his death, absence, or inability, by one of the Vice-Presidents, when thereto duly authorized.

*See Chap. ii, art. 7; chap. iv, art. 1, 3; chap. vi, art. 2; chap. vii, art. 1; chap. x, art. 6; chap. xi, art. 1, 2; chap. xii, art. 1.*

## CHAPTER VI.

### THE SECRETARIES.

ARTICLE 1. The Corresponding Secretary shall conduct the correspondence of the Academy and of the Council, recording or making an entry of all letters written in its name, and preserving for the files all official papers which may be received. At each meeting of the Council he shall present the communications addressed to the Academy which have been received since the previous meeting, and at the next meeting of the Academy he shall present such as the Council may determine.

He shall notify all persons who may be elected Fellows or Foreign Honorary Members, send to each a copy of the Statutes, and on their acceptance issue the proper Diploma. He shall also notify all meetings of the Council; and in case of the death, absence, or inability of the Recording Secretary he shall notify all meetings of the Academy.

Under the direction of the Council, he shall keep a List of the Fellows and Foreign Honorary Members, arranged in their several Classes and Sections. It shall be printed annually and issued as of the first day of July.

*See Chap. ii, art. 7; chap. iii; chap. iv, art. 1; chap. x, art. 6; chap. xi, art. 1; chap. xii, art. 1.*

ARTICLE 2. The Recording Secretary shall have the custody of the Charter, Corporate Seal, Archives, Statute-Book, Journals, and all literary papers belonging to the Academy.

Fellows borrowing such papers or documents shall receipt for them to their custodian.

The Recording Secretary shall attend the meetings of the Academy and keep a faithful record of the proceedings with the names of the Fellows present; and after each meeting is duly opened, he shall read the record of the preceding meeting.

He shall notify the meetings of the Academy to each Fellow and by mail at least seven days beforehand, and in his discretion may also cause the meetings to be advertised; he shall apprise Officers and Committees of their election or appointment, and inform the Treasurer of appropriations of money voted by the Academy.

After all elections, he shall insert in the Records the names of the Fellows by whom the successful nominees were proposed.

He shall send the Report of the Nominating Committee in print to every Fellow having the right to vote at least three weeks before the Annual Meeting.

*See Chap. iv, art. 3.*

In the absence of the President and of the Vice-Presidents he shall, if present, call the meeting to order, and preside until a Chairman is chosen.

*See Chap. 1; chap. ii, art. 7; chap. iv, art. 3, 4, 5; chap. x, art. 6; chap. xi, art. 1, 2; chap. xii, art. 1, 3.*

ARTICLE 3. The Secretaries, with the Editor, shall have authority to publish such of the records of the meetings of the Academy as may seem to them likely to promote its interests.

## CHAPTER VII.

### THE TREASURER AND THE TREASURY.

ARTICLE 1. The Treasurer shall collect all money due or payable to the Academy, and all gifts and bequests made to it. He shall pay all bills due by the Academy, when approved by the proper officers, except those of the Treasurer's office, which may be paid without such approval; in the name of the Academy he shall sign all leases of real estate; and, with the written consent of a member of the Committee on Finance, he shall make all transfers of stocks, bonds, and other securities belonging to the Academy, all of which shall be in his official custody.

He shall keep a faithful account of all receipts and expenditures,



submit his accounts annually to the Auditing Committee, and render them at the expiration of his term of office, or whenever required to do so by the Academy or the Council.

He shall keep separate accounts of the income of the Rumford Fund, and of all other special Funds, and of the Appropriation thereof, and render them annually.

His accounts shall always be open to the inspection of the Council.

ARTICLE 2. He shall report annually to the Council at its March meeting on the expected income of the various Funds and from all other sources during the ensuing financial year. He shall also report the names of all Fellows who may be then delinquent in the payment of their Annual Dues.

ARTICLE 3. He shall give such security for the trust reposed in him as the Academy may require.

ARTICLE 4. With the approval of a majority of the Committee on Finance, he may appoint an Assistant Treasurer to perform his duties, for whose acts, as such assistant, he shall be responsible; or, with like approval and responsibility, he may employ any Trust Company doing business in Boston as his agent for the same purpose, the compensation of such Assistant Treasurer or agent to be fixed by the Committee on Finance and paid from the Funds of the Academy.

ARTICLE 5. At the Annual Meeting he shall report in print all his official doings for the preceding year, stating the amount and condition of all the property of the Academy entrusted to him, and the character of the investments.

ARTICLE 6. The Financial Year of the Academy shall begin with the first day of April.

ARTICLE 7. No person or committee shall incur any debt or liability in the name of the Academy, unless in accordance with a previous vote and appropriation therefor by the Academy or the Council, or sell or otherwise dispose of any property of the Academy, except cash or invested funds, without previous consent and approval of the Council.

*See* Chap. ii, art. 4, 5; chap. vi, art. 2; chap. x, art. 6; chap. xi, art. 1, 2, 3; chap. xii, art. 1.

## CHAPTER VIII.

## THE LIBRARIAN AND THE LIBRARY.

ARTICLE 1. The Librarian shall have charge of the printed books, keep a correct catalogue thereof, and provide for their delivery from the Library.

At the Annual Meeting, as Chairman of the Committee on the Library, he shall make a Report on its condition.

ARTICLE 2. In conjunction with the Committee on the Library he shall have authority to expend such sums as may be appropriated by the Academy for the purchase of books, periodicals, etc., and for defraying other necessary expenses connected with the Library.

ARTICLE 3. All books procured from the income of the Rumford Fund or of other special Funds shall contain a book-plate expressing the fact.

ARTICLE 4. Books taken from the Library shall be receipted for to the Librarian or his assistant.

ARTICLE 5. Books shall be returned in good order, regard being had to necessary wear with good usage. If any book shall be lost or injured, the Fellow to whom it stands charged shall replace it by a new volume or by a new set, if it belongs to a set, or pay the current price thereof to the Librarian, whereupon the remainder of the set, if any, shall be delivered to the Fellow so paying, unless such remainder be valuable by reason of association.

ARTICLE 6. All books shall be returned to the Library for examination at least one week before the Annual Meeting.

ARTICLE 7. The Librarian shall have the custody of the Publications of the Academy. With the advice and consent of the President, he may effect exchanges with other associations.

*See Chap. ii, art. 6; chap. xi, art. 1, 2.*

## CHAPTER IX.

## THE EDITOR AND THE PUBLICATIONS.

ARTICLE 1. The Editor shall have charge of the conduct through the press of the Proceedings and the Memoirs, and all correspondence relative thereto, and shall have power to fix the price at which individual numbers of the Proceedings and Memoirs are sold.

ARTICLE 2. In conjunction with the Committee of Publication, he shall have authority to expend such sums as may be appropriated by the Academy for printing the publications and for defraying other expenses therewith connected.

ARTICLE 3. All publications which are financed in whole or in part from the income of the Rumford Fund or from the income of other special funds, and all publications of work done with the aid of the Rumford Fund or other special funds, shall contain a conspicuous statement of this fact.

ARTICLE 4. Two hundred extra copies of each paper printed in the Proceedings or Memoirs shall be placed at the disposal of the author without charge.

If, on account of the number of communications offered for publication, it shall be necessary to decline for publication communications otherwise acceptable, members of the Academy shall be given preference in each of the several Classes over non-members; but whenever it shall be necessary to exercise this preference, the Editor shall inform the Council of the fact.

*See Chap. iv, art. 1; chap. vi, art. 3; chap. x, art. 6; chap. xi, art. 4.*

## CHAPTER X.

## THE COUNCIL.

ARTICLE 1. The Council shall exercise a discreet supervision over all nominations and elections to membership, and in general supervise all the affairs of the Academy not explicitly reserved to the Academy as a whole or entrusted by it or by the Statutes to standing or special committees.

It shall consider all nominations duly sent to it by any Class Committee, and act upon them in accordance with the provisions of Chapter III.

With the consent of the Fellow interested, it shall have power to make transfers between the several Sections, reporting its action to the Academy.

*See Chap. iii, art. 2, 3; chap. xi, art. 1.*

ARTICLE 2. Nine members shall constitute a quorum.

ARTICLE 3. It shall establish rules and regulations for the transaction of its business, and provide all printed and engraved blanks and books of record.

ARTICLE 4. It shall act upon all resignations of officers, and all resignations and forfeitures of Fellowship; and cause the Statutes to be faithfully executed.

It shall appoint all agents and subordinates not otherwise provided for by the Statutes, prescribe their duties, and fix their compensation. They shall hold their respective positions during the pleasure of the Council.

ARTICLE 5. It may appoint, for terms not exceeding one year, and prescribe the functions of, such committees of its number, or of the Fellows of the Academy, as it may deem expedient, to facilitate the administration of the affairs of the Academy or to promote its interests.

ARTICLE 6. At its March meeting it shall receive reports from the President, the Secretaries, the Treasurer, and the Standing Committees, on the appropriations severally needed for the ensuing financial year. At the same meeting the Treasurer shall report on the expected income of the various Funds and from all other sources during the same year.

A report from the Council shall be submitted to the Academy, for action, at the March meeting, recommending the appropriation which in the opinion of the Council should be made.

On the recommendation of the Council, special appropriations may be made at any Stated Meeting of the Academy, or at a Special Meeting called for the purpose.

*See Chap. xi, art. 3.*

ARTICLE 7. After the death of a Fellow or Foreign Honorary Member, it shall appoint a member of the Academy to prepare a biographical notice for publication in the Proceedings.

ARTICLE 8. It shall report at every meeting of the Academy such business as it may deem advisable to present.

*See* Chap. ii, art. 4, 5, 8; chap. iv, art. 1, 2; chap. vi, art. 1; chap. vii, art. 1; chap. xii, art. 1, 4.

## CHAPTER XI.

### STANDING COMMITTEES.

ARTICLE 1. The Class Committee of each Class shall consist of the Vice-President, who shall be chairman, and the four Councillors of the Class, together with such other officer or officers annually elected as may belong to the Class. It shall consider nominations to Fellowship in its own Class, and report in writing to the Council such as may receive at a Class Committee Meeting a majority of the votes cast, provided at least three shall have been in the affirmative.

*See* Chap. iii, art. 2.

ARTICLE 2. At the Annual Meeting the following Standing Committees shall be elected by ballot to serve for the ensuing year:

(i) *The Committee on Finance*, to consist of four Fellows, who, through the Treasurer, shall have full control and management of the funds and trusts of the Academy, with the power of investing the funds and changing the investments thereof in their discretion.

*See* Chap. iv, art. 3; chap. vii, art. 1, 4; chap. x, art. 6.

(ii) *The Rumford Committee*, to consist of seven Fellows, who shall report to the Academy on all applications and claims for the Rumford Premium. It alone shall authorize the purchase of books, publications and apparatus at the charge of the income from the Rumford Fund, and generally shall see to the proper execution of the trust.

*See* Chap. iv, art. 3; chap. x, art. 6.

(iii) *The Cyrus Moors Warren Committee*, to consist of seven Fellows, who shall consider all applications for appropriations from the income of the Cyrus Moors Warren Fund, and generally shall see to the proper execution of the trust.

*See* Chap. iv, art. 3; chap. x, art. 6.

(iv) *The Committee of Publication*, to consist of the Editor, *ex officio*, as Chairman, and four other Fellows, one from each Class, to whom all communications submitted to the Academy for publication shall be referred, and to whom the printing of the Proceedings and the Memoirs shall be entrusted.

It shall fix the price at which volumes of the publications shall be sold; but Fellows may be supplied at half price with volumes which may be needed to complete their sets, but which they are not entitled to receive gratis.

It shall determine when the pressure of material offered for publication makes it necessary to give preference to members of the Academy as compared with non-members, or to give priority to certain members as compared with others, and to what extent this preference or priority shall be applied in each of the four Classes, to the end that a proper balance of the facilities of publication with respect to subject matter and authors may be maintained.

See Chap. iv, art. 3; chap. vi, art. 1, 3; chap. ix; chap. x, art. 6.

(v) *The Committee on the Library*, to consist of the Librarian, *ex officio*, as Chairman, and four other Fellows, one from each Class, who shall examine the Library and make an annual report on its condition and management.

See Chap. iv, art. 3; chap. viii, art. 1, 2; chap. x, art. 6.

(vi) *The House Committee*, to consist of four Fellows, who shall have charge of all expenses connected with the House, including the general expenses of the Academy not specifically assigned to the care of other Committees or Officers.

See Chap. iv, art. 1, 3; chap. x, art. 6.

(vii) *The Committee on Meetings*, to consist of the President, the Recording Secretary, and four other Fellows, who shall have charge of plans for meetings of the Academy.

See Chap. iv, art. 3; chap. x, art. 6.

(viii) *The Auditing Committee*, to consist of two Fellows, who shall audit the accounts of the Treasurer, with power to employ an expert and to approve his bill.

See Chap. iv, art. 3; chap. vii, art. 1; chap. x, art. 6.

ARTICLE 3. The Standing Committees shall report annually to the Council in March on the appropriations severally needed for the ensuing financial year; and all bills incurred on account of these Committees, within the limits of the several appropriations made by the Academy, shall be approved by their respective Chairmen.

In the absence of the Chairman of any Committee, bills may be approved by any member of the Committee whom he shall designate for the purpose.

*See Chap. vii, art. 1, 7; chap. x, art. 6.*

## CHAPTER XII.

### MEETINGS, COMMUNICATIONS, AND AMENDMENTS.

ARTICLE 1. There shall be annually eight Stated Meetings of the Academy, namely, on the second Wednesday of October, November, December, January, February, March, April, and May. Only at these meetings, or at adjournments thereof regularly notified, or at Special Meetings called for the purpose, shall appropriations of money be made or amendments of the Statutes or Standing Votes be effected.

The Stated Meeting in May shall be the Annual Meeting of the Corporation.

Special Meetings shall be called by either of the Secretaries at the request of the President, of a Vice-President, of the Council, or of ten Fellows having the right to vote; and notifications thereof shall state the purpose for which the meeting is called.

A meeting for receiving and discussing literary or scientific communications may be held on the fourth Wednesday of each month, excepting July, August, and September; but no business shall be transacted at said meetings.

ARTICLE 2. Twenty-five Fellows having the right to vote shall constitute a quorum for the transaction of business at Stated or Special Meetings. Eighteen Fellows shall be sufficient to constitute a meeting for literary or scientific communications and discussions.

ARTICLE 3. Upon the request of the presiding officer or the Recording Secretary, any motion or resolution offered at any meeting shall be submitted in writing.

ARTICLE 4. No report of any paper presented at a meeting of the Academy shall be published by any Fellow without the consent of the author; and no report shall in any case be published by any Fellow in a newspaper as an account of the proceedings of the Academy without the previous consent and approval of the Council. The Council, in its discretion, by a duly recorded vote, may delegate its authority in this regard to one or more of its members.

ARTICLE 5. No Fellow shall introduce a guest at any meeting of the Academy until after the business has been transacted, and especially until after the result of the balloting upon nominations has been declared.

ARTICLE 6. The Academy shall not express its judgment on literary or scientific memoirs or performances submitted to it, or included in its Publications.

ARTICLE 7. All proposed Amendments of the Statutes shall be referred to a committee, and on its report, at a subsequent Stated Meeting or at a Special Meeting called for the purpose, two-thirds of the ballot cast, and not less than twenty-five, must be affirmative to effect enactment.

ARTICLE 8. Standing Votes may be passed, amended, or rescinded at a Stated Meeting, or at a Special Meeting called for the purpose, by a vote of two-thirds of the members present. They may be suspended by a unanimous vote.

*See* Chap. ii, art. 5, 8; chap. iii; chap. iv, art. 3, 4, 5; chap. v, art. 1; chap. vi, art. 1, 2; chap. x, art. 8.



## STANDING VOTES.

1. Communications of which notice has been given to either of the Secretaries shall take precedence of those not so notified.

2. Fellows may take from the Library six volumes at any one time, and may retain them for three months, and no longer. Upon special application, and for adequate reasons assigned, the Librarian may permit a larger number of volumes, not exceeding twelve, to be drawn from the Library for a limited period.

3. Works published in numbers, when unbound, shall not be taken from the Hall of the Academy without the leave of the Librarian.

4. The Council, under such rules respecting nominations as it may prescribe, may elect as Associates of the Academy a limited number of men of mark in affairs or of distinguished service in the community.

Associates shall be entitled to the same privileges as Fellows, but shall not have the right to vote.

The admission fee and annual dues of Associates shall be the same as those of Fellows residing within fifty miles of Boston.

5. Communications offered for publication in the Proceedings or Memoirs of the Academy shall not be accepted for publication before the author shall have informed the Committee on Meetings of his readiness, either himself or through some agent, to use such time as the Committee may assign him at such meeting as may be convenient both to him and to the Committee, for the purpose of presenting to the Academy a general statement of the nature and significance of the results contained in his communication.

### RUMFORD PREMIUM.

In conformity with the terms of the gift of Sir Benjamin Thompson, Count Rumford, of a certain Fund to the American Academy of Arts and Sciences, and with a decree of the Supreme Judicial Court of Massachusetts for carrying into effect the general charitable intent and purpose of Count Rumford, as expressed in his letter of gift, the Academy is empowered to make from the income of the Rumford Fund, as it now exists, at any Annual Meeting, an award of a gold and a silver medal, being together of the intrinsic value of three hundred dollars, as a Premium to the author of any important discovery or useful improvement in light or heat, which shall have been made and published by printing, or in any way made known to the public, in any part of the continent of America, or any of the American islands; preference always being given to such discoveries as, in the opinion of the Academy, shall tend most to promote the good of mankind; and, if the Academy sees fit, to add to such medals, as a further Premium for such discovery and improvement, a sum of money not exceeding three hundred dollars.

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